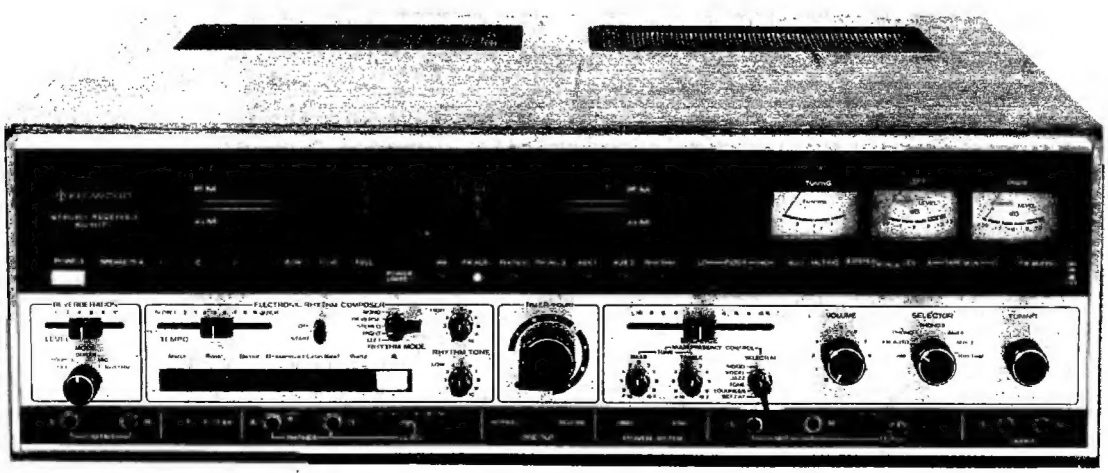
KENWOOD

HI/FI STEREO COMPONENTS

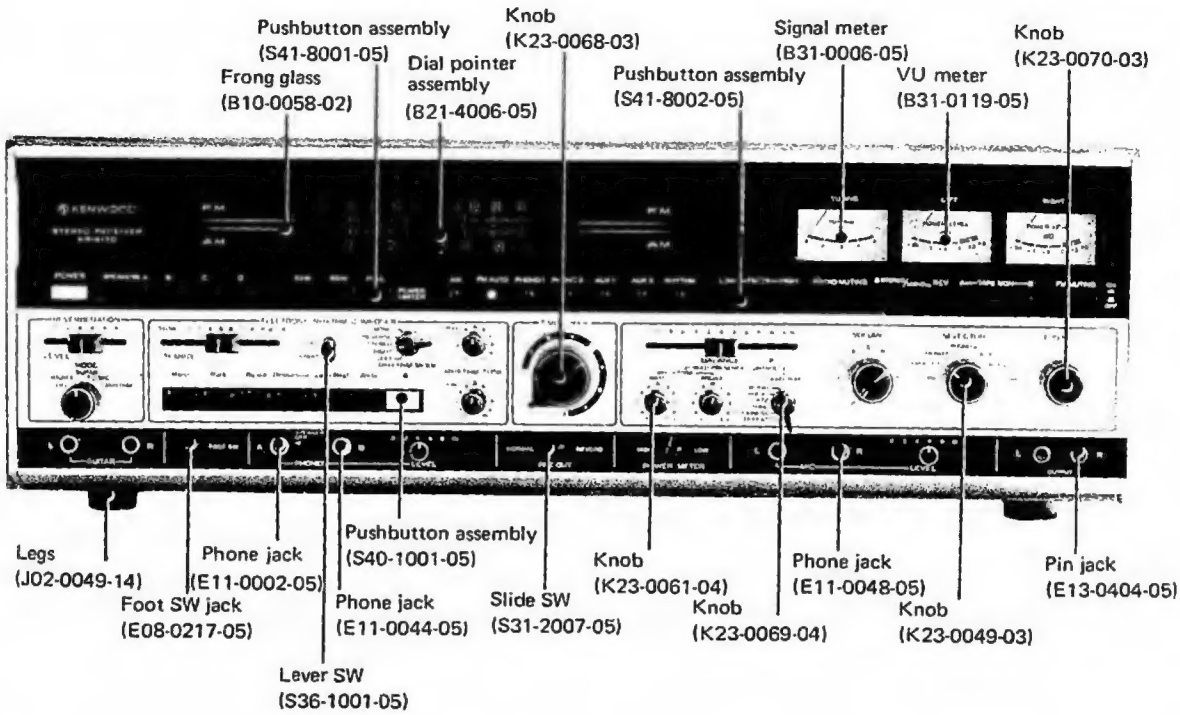
# SERVICE MANUAL

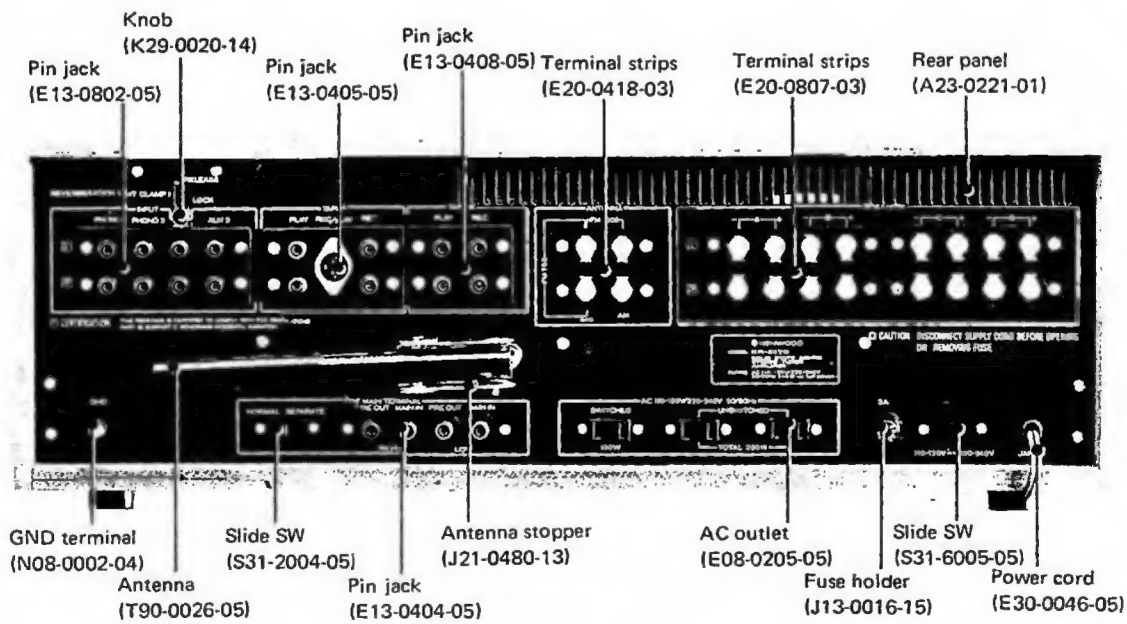
## KR-6170



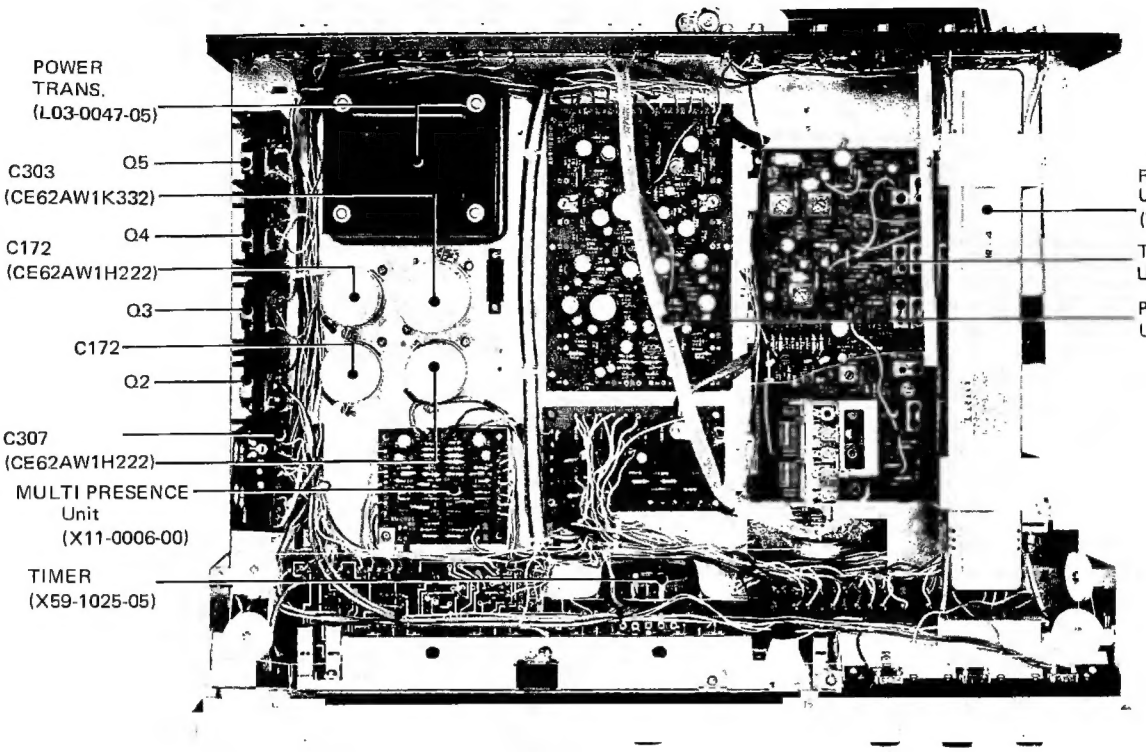
SOLID STATE AM-FM STEREO RECEIVER
WITH ELECTRONIC RHYTHM COMPOSER

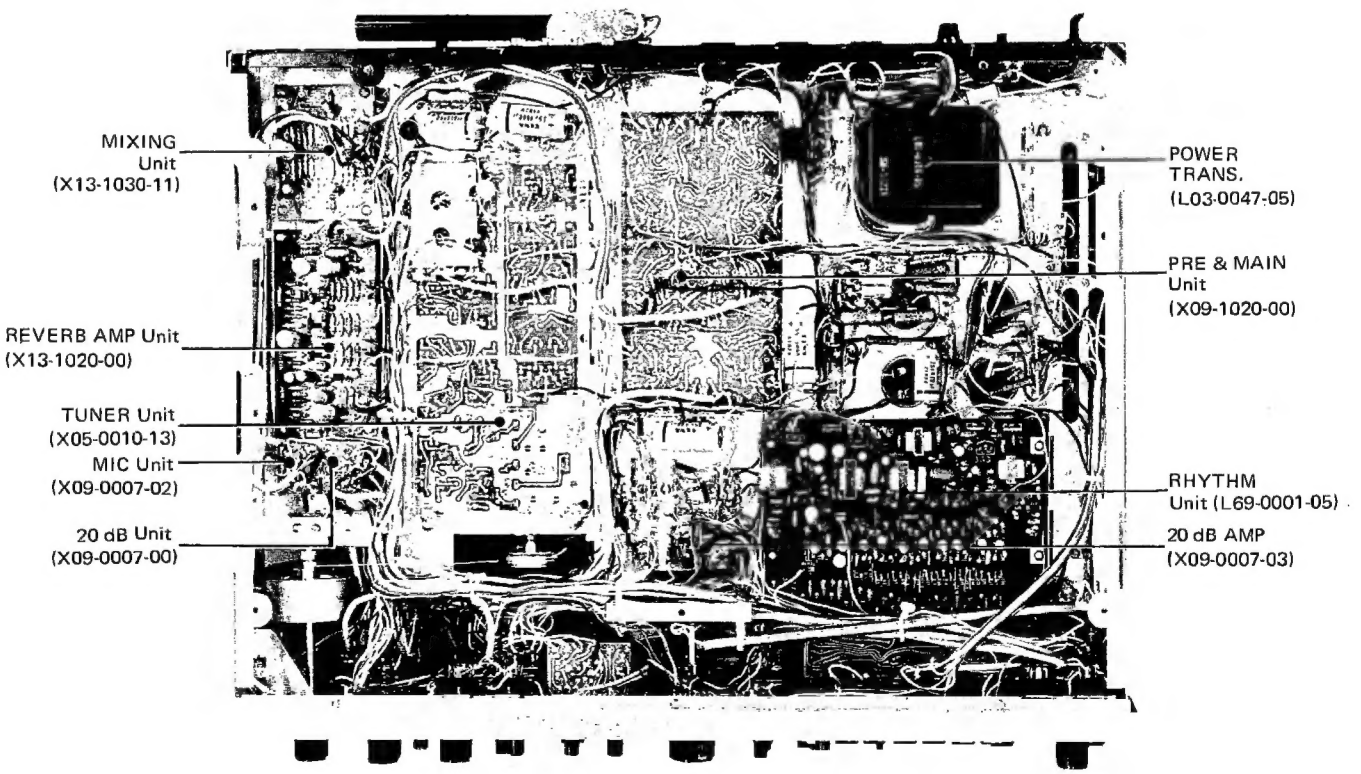
# ● EXTERNAL VIEW



# ● TOP & BOTTOM CHASSIS VIEW



## ■ FM-RF/IF ADJUSTMENT

| STEP | ALIG. | FM SSG/SWEEP G. | | TUNING DIAL SETTING | VTVM or SCOPE COUPLING | ADJUST | CHECK |
|---|---|---|---|---|---|---|---|
| | | COUPLING | SIGNAL | | | | |
| 1 | IF trans. | *FM antenna terminal or TEST POINT (A) | 10.7MHz (Unmod.) | Any non-interfering setting | SCOPE to the TEST POINT (B) | (X05-0010-13) Ta3, 5 Prim. & Sec. | Maximum amplitude and symmetry with 10.7MHz marker centered on the response. |
| 2 | IF trans. | *FM antenna terminal or TEST POINT (A) | 10.7MHz (Unmod.) | Any non-interfering setting | SCOPE to the TEST POINT (C) | (X05-0010-13) Ta6 Prim. & Sec. | Maximum amplitude and symmetry with 10.7MHz marker centered on the response. |
| Check the MUTING SW to the OFF and emitter voltage of transistor Qa6 to be more 1.9V. If voltage does not appear disconnect the wire of "C" terminal in X05-0010-13. And then connect the resistor 560Ω to the capacitor Ca38 in parallel. | | | | | | | |
| 3 | IF trans. | *FM antenna terminal or TEST POINT (A) | 10.7MHz (Unmod.) | Any non-interfering setting | SCOPE to the TEST POINT (D) | (X05-0010-13) Ta7 Prim. & Sec. | Maximum amplitude and symmetry with 10.7MHz marker centered on the response |
| 4 | DISCRIMI-NATOR | *FM antenna terminal or TEST POINT (A) | 98MHz 400Hz (Mod.) 75kHz (Dev.) 0.5~1mV | Tune for maximum using tuning indicator | SCOPE to the recording jack | (X05-0010-13) Ta8 Prim. & Sec. | S-response and its symmetry on each side of 10.7MHz center frequency. |
| 5 | RF | FM antenna terminal | 90MHz 400Hz (Mod.) 75kHz (Dev.) 1.5~2μV | 90MHz | VTVM to the recording jack | (X05-0010-13) Ta4 | Turn it to receive the SSG freq. |
| 6 | RF | FM antenna terminal | 90MHz 400Hz (Mod.) 75kHz (Dev.) 1.5~2μV | 90MHz | VTVM to the recording jack | (X05-0010-13) Ta1, 2 | Adjust the sensitivity to be maximum. |
| 7 | RF | FM antenna terminal | 106MHz 400Hz (Mod.) 75kHz (Dev.) 1.5~2μV | 106MHz | VTVM to the recording jack | (X05-0010-13) CTa3 | Turn it to receive the SSG freq. |
| 8 | RF | FM antenna terminal | 106MHz 400Hz (Mod.) 75kHz (Dev.) 1.5~2μV | 106MHz | VTVM to the recording jack | (X05-0010-13) CTa1, 2 | Adjust sensitivity to the maximum |
| 9 | Repeat steps 5 ~ 8 until no further improvement is possible. | | | | | | |
| 10 | METER | FM antenna terminal | 98MHz 400Hz (Mod.) 75kHz (Dev.) 1mV | Tune for maximum using tuning indicator | – | (X05-0010-13) VRa1 | "4" indicates |
| 11 | OUT | FM antenna terminal | 98MHz 400Hz (Mod.) 75kHz (Dev.) 1mV | Tune for maximum using tuning indicator | VTVM to the recording jack | (X05-0010-13) VRa2 | Adjust the output to be 1V |
| * If can't see the waveform on the scope, move the sweep generator to the TEST POINT (A). A across the antenna terminal in series with a capacitor 5 ~ 10pF. | | | | | | | |

# ● ADJUSTMENT

## ■ SCA FILTER ADJUSTMENT

| STEP | AUDIO SIGNAL GENERATOR COUPLING | AUDIO SIGNAL GENERATOR FREQ. | AC VTVM & SCOPE COUPLING | ADJUST | CHECK |
|---|---|---|---|---|---|
| 1 | TEST POINT (E) | 67kHz 1V | TEST POINT (F) | (X05-0010-13) Ta15 | Minimum deflection |

## ■ MPX ADJUSTMENT

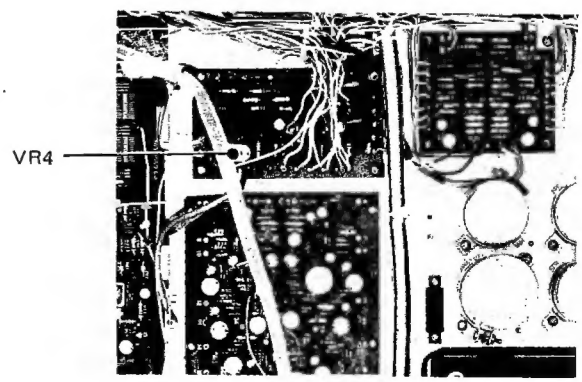
| STEP | COUPLING | FM SSG MOD. FREQ. | SELECTOR | 19kHz PILOT | VTVM & SCOPE COUPLING | ADJUST | CHECK |
|---|---|---|---|---|---|---|---|
| 1 | FM antenna terminal | 98MHz 400Hz (Mod.) 67.5kHz (Dev.) 1mV | NORMAL or REVERSE | ON | OFF | (X05-0010-13) VRa4, VRa5 | "STEREO" indicator illuminate |
| 2 | FM antenna terminal | 98MHz 400Hz (Mod.) 67.5kHz (Dev.) 1mV | REVERSE | ON | Recording jack | (X05-0010-13) Ta13, Ta14 | With Ta13 increase the output to be max. and with Ta14 make the best waveform. |
| 3 | FM antenna terminal | 98MHz 400Hz (Mod.) 40kHz (Dev.) | NORMAL | ON | Recording jack | (X05-0010-13) VRa5 | Adjust the variable resistor until the indicator goes out and bring them back to the point where they are turned on again. |
| 4 | FM antenna terminal | 98MHz 400Hz (Mod.) 67.5kHz (Dev.) 10μV | NORMAL | ON | Recording jack | (X05-0010-13) VRa4 | |
| 5 | FM antenna terminal | 98MHz 400Hz (Mod.) 67.5kHz (Dev.) 1mV | LEFT | ON | Recording jack of RIGHT | (X09-1020-00) VRe3 | Minimum RIGHT output. |
| 6 | FM antenna terminal | 98MHz 400Hz (Mod.) 67.5kHz (Dev.) 1mV | RIGHT | ON | Recording jack of LEFT | (X09-1020-00) VRe3 | Minimum LEFT output. |

* As can't get the same value, set the variable resistor to the point taking the average.

## ■ MUTING ADJUSTMENT

Coupling the SSG to the antenna terminal, setting MUTING SW to be OFF, and VTVM to recording jack. As supply the signal (98MHz, modulation at 400Hz, deviation of 75kHz, input 1mV) to the set VTVM indicates 1V. Next set the MUTING SW to ON and adjust the variable resistor VR4 (50kΩ) so that VTVM indicates 0.5 ~ 0.7V.

More check whether AM broadcast is received or not. If not, check whether base voltage of transistor Q1 is supplied more 0.6V or not.



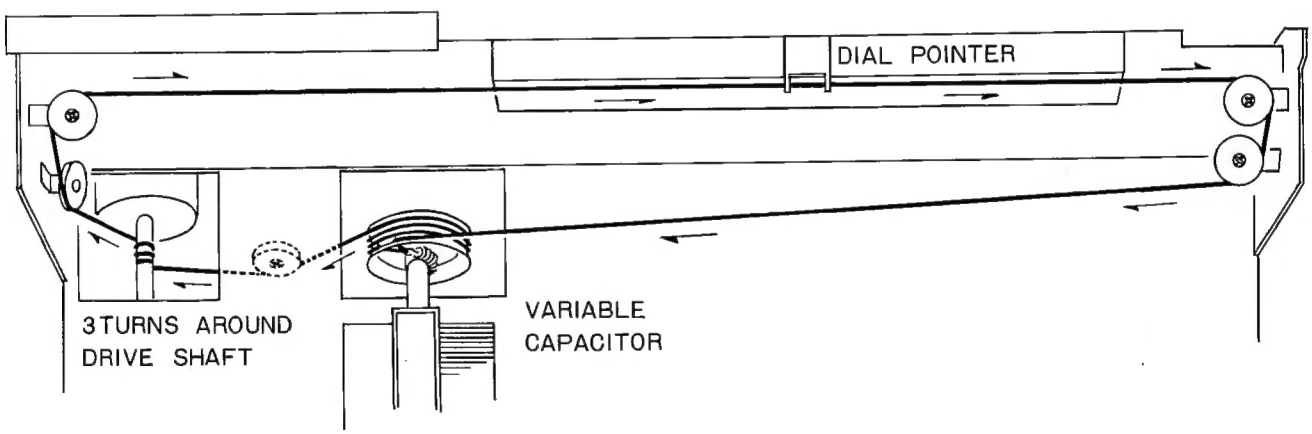

TOP CHASSIS VIEW

# ● ADJUSTMENT

## ■ AM ADJUSTMENT

| STEP | ALIG | SSG | | TUNING DIAL SETTING | VTVM & OSC COUPLING | ADJUST | CHECK |
|---|---|---|---|---|---|---|---|
| | | COUPLING | SIGNAL | | | | |
| 1 | IF Trans. | AM antenna terminal | 455kHz | Any non-interfering | Recording jack | X05-0010-13 Ta10 | Maximum amplitude and symmetry with 455kHz marker centered on response |
| 2 | IF Trans. | AM antenna terminal | 455kHz | Any non-interfering | Recording jack | X05-0010-13 Ta11 | Maximum amplitude and symmetry with 455kHz marker centered on response |
| 3 | IF Trans. | AM antenna terminal | 455kHz | Any non-interfering | Recording jack | X05-0010-13 Ta12 | Maximum amplitude and symmetry with 455kHz marker centered on response |
| 4 | RF | AM antenna terminal | 600kHz 400Hz (30% Mod.) 1mV | 600kHz | Recording jack | X05-0010-13 Ta9, Loop-stick antenna | With Ta9 correspond to SSG freq. With Loopstick antenna the sensitivity to be maximum. |
| 5 | RF | AM antenna terminal | 1,400kHz 400Hz (30% Mod.) | 1,400kHz | Recording jack | X05-0010-13 CTa4 | With CTa4 correspond to SSG freq. |
| * Repeat steps 4, 5 until no further improvement is possible. | | | | | | | |
| 6 | METER | AM antenna terminal | 1000kHz 400Hz (30% Mod.) | 1000kHz | Recording jack | X05-0010-13 VRa3 | "4" indicates |

## ■ DIAL CORD STRINGING



# ● ADJUSTMENT

## ■ TESTING PROCEDURES

Perform the test according to the following procedures.

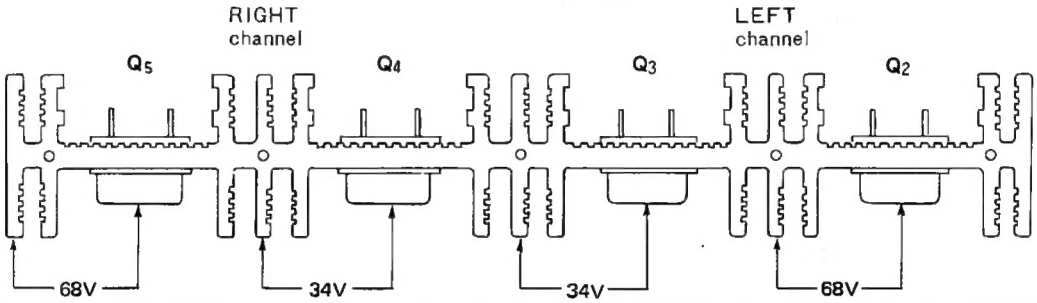
1. Using a tester, measure the voltage between the chassis and collector of the power transistor Q2 or Q5. If a tester indicates approximately 68V, it is normal.
2. Also measure the voltage between the chassis and collector of the power transistor Q3 or Q4. If a tester indicates approximately 34V, it is normal.

## ■ IDLING CURRENT

1. Connect the dummy load (8Ω, 80 watts) to the output terminal.
2. Connect the audio generator to the main unit.

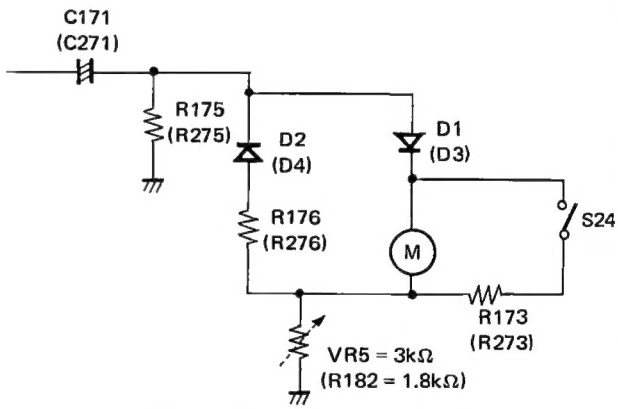
Oscilloscope and AC VTVM are connected across the dummy.

3. Before checking the idling current, turn on power switch in a few minutes, adjust the variable resistor (VRe1, 2) so that tester (or DC VTVM) coupling to the collector of transistors indicates 30mA. And also check the waveform to be correct feeding the signal (1kHz) to the set.



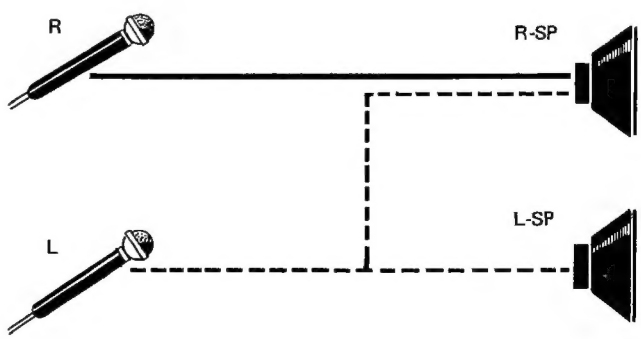

## ■ ON METER SETTING

As supply the signal (1kHz, 100mV) to the MAIN-IN jack, setting POWER LIMITER at FULL, PRE-MAIN SEPARATE SW at SEPARATE, right meter indicates around the 0VU. And then adjust the PC trimmer potentiometer VR5 (3kΩ) so that left meter indicates the 0VU as well as right.




## ■ ON MIC JACK

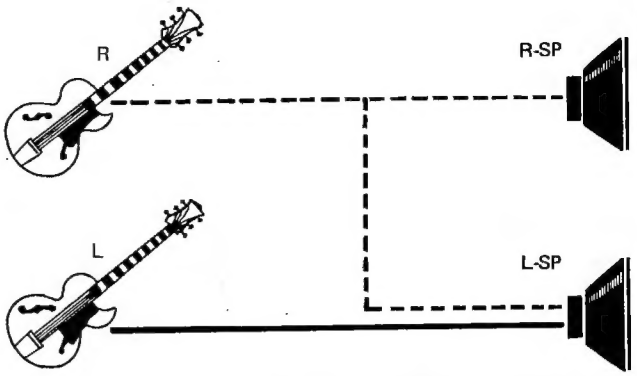
As plug the MIC jack in MIC-L speakers work as monophonic. And then the MIC jack in MIC-R only right speaker does. Next plug MIC jacks in MIC-R and MIC-L each speakers work as stereophonic.



# ● ADJUSTMENT

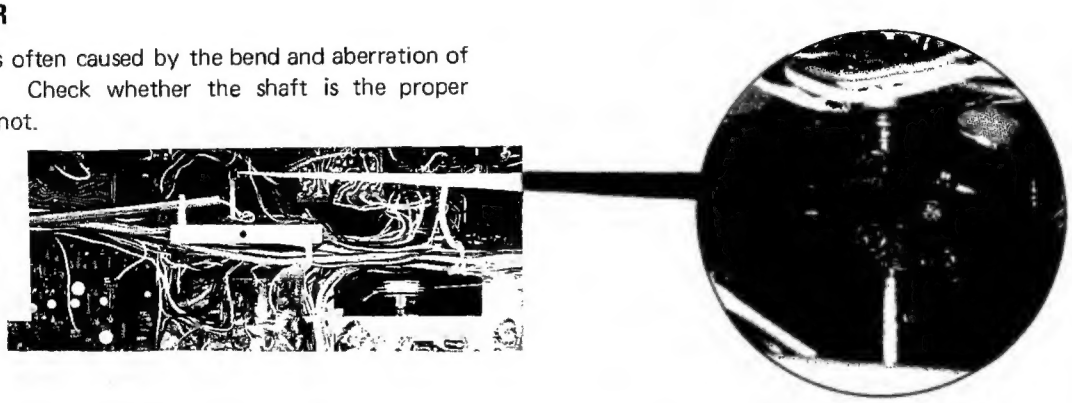
## ■ ON GUITAR JACK

As plug the GUITAR jack in GUITAR-R speakers work as monophonic. And then the GUITAR jack in GUITAR-L only left speaker does. Next plug GUITAR-jacks in GUITAR-R and GUITAR-L each speakers work as stereophonic.




## ■ ON TIMER

The time lag is often caused by the bend and aberration of TIMER shaft. Check whether the shaft is the proper connection or not.



## ■ RELATION OF SPEAKERS SELECTOR AND SPEAKERS

See the right table. It is the table that the relation of speaker connection and speaker selector. For example, push the selector button B or A & B, connecting the speakers to A terminal, they don't work. And also push the button A or A & B, connecting the speakers to B terminal, they don't.

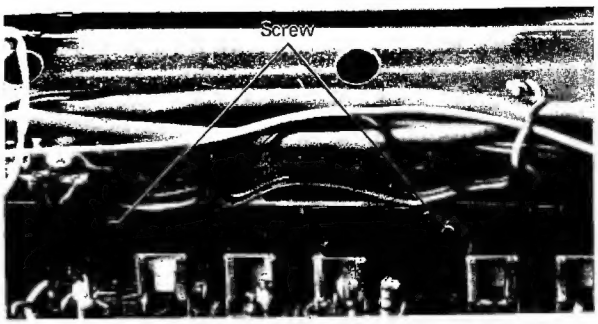
| Selector \ SP | A (C) | B (D) | A & B (C & D) |
|---|---|---|---|
| A (C) | ♪ | 𝄽 | ♪ |
| B (D) | 𝄽 | ♪ | ♪ |
| A & B (C & D) | 𝄽 | 𝄽 | ♪ |

♪ speakers to wrok

𝄽 speakers not to work

## ■ HOW TO REPLACE THE PC BOARD

Pc boards are stopped by screws. As replace them loose screws.



# ● SPECIFICATIONS

## FM TUNER SECTION:

**ANTENNA IMPEDANCE:** 300 ohms balanced & 75 ohms unbalanced.
**USABLE SENSITIVITY (IHF):** 1.9 μV
**HARMONIC DISTORTION MONO:** 0.5%
**(at 400Hz 100% Mod.) STEREO:** 0.8%
**SIGNAL TO NOISE RATIO:** 60 dB
**CAPTURE RATIO (IHF):** 4.0 dB
**SELECTIVITY (ALT. CH.) (IHF):** 45 dB
**IMAGE REJECTION:** 60 dB
**IF REJECTION:** 100 dB
**AM SUPPRESION:** 45 dB
**STEREO SEPARATION (at 1 kHz):** 30 dB
**(at 10 kHz):** 20 dB
**SUB CARRIER SUPPRESSION:** 40 dB
**STEREO AUTO-SWITCHING LEVEL:** 10 μV
**FRONT END:** 1-FET, 3-Gang
**IF-STAGE:** 1-IC

## AM TUNER SECTION:

**ANTENNA:** Bult-in ferrite bar antenna & External antenna terminals
**USABLE SENSITIVITY (IHF):** 25 μV
**SELECTIVITY (IHF):** 25 dB
**IMAGE REJECTION:** 45 dB
**IF REJECTION:** 35 dB
**FRONT END:** 2-Gang

## AMPLIFIER SECTION:

**POWER OUTPUT:**
both ch. at 4 ohms: 180 watts
both ch. at 8 ohms: 130 watts
**DYNAMIC POWER OUTPUT:**
both ch. at 4 ohms: 150 watts
both ch. at 8 ohms: 110 watts
**CONTINUOUS POWER OUTPUT:**
each ch. at 4 ohms: 50/50 watts
each ch. at 8 ohms: 40/40 watts
both ch. at 4 ohms: 39/39 watts
both ch. at 8 ohms: 33/33 watts
**HARMONIC DISTORTION (at rated):** 0.5%
(at −3 dB rated): 0.1%
**INTERMODULATION DISTORTION:**
**(at rated):** 0.5%
(at −3 dB rated): 0.2%
**FREQUENCY RESPONSE:**
**HIGH LEVEL (AUX) INPUT:** 20 ~ 40,000 Hz ±1.5 dB
**POWER BANDWIDTH (IHF):** 17 ~ 30,000 Hz
**HUM & NOISE:**
PHONO 1, 2: 65 dB
MIC: 58 dB
AUX/TAPE PLAY: 75 dB
**INPUT SENSITIVITY (for rated output):**
PHONO 1: 2.5 mV 50 K ohms
PHONO 2: 2.5 mV 50 K ohms
MIC: 2.0 mV 10 K ohms
GUITAR: 20 mV 30 K ohms
AUX 1: 180 mV 50 K ohms
AUX 2: 180 mV 50 K ohms
TAPE PLAY A: 180 mV 50 K ohms
TAPE PALY B: 180 mV 50 K ohms
MAIN INPUT: 100 mV
**DAMPING FACTOR (at 8 ohms):** 50
**SPEAKER IMPEDANCE:** accept 4 to 16 ohms
**MULTI PRESENCE CONTROL**
SELECTOR:
DEFEAT, LOUDNESS at 100 Hz: +10 dB
TONE, JAZZ, VOCAL, MOOD
BASS CONTROL (at 100 Hz): ±10 dB
TREBLE CONTROL (at 10,000 Hz): ±10 dB

## ELECTRONIC RHYTHM COMPOSER SECTION:

RHYTHM SELECTOR:
(1) March, (2) Fox Trot, (3) Rock, (4) R & B, (5) Ballad, (6) Shuffle, (7) Bossanova 1, (8) Bossanova 2, (9) Latin Beat (10) Mambo, (11) Waltz, (12) Jazz Waltz.
ELECTRONIC PERCUSSIONS: 5 different Sounds
RHYTHM MODE SWITCH: Left, Right, Stereo, Reverse, Mono
FOOT SWITCH JACK: Yes.
ACCESSORY PARTS: Foot Switch (Remote Control Switch of START and BREAK for E, R, C,)

## REVERBERATION SECTION:

LEVEL CONTROL: 0 to 2 seconds
MODE: OFF–SOURCE–GUITAR–MIC– RHYTHM

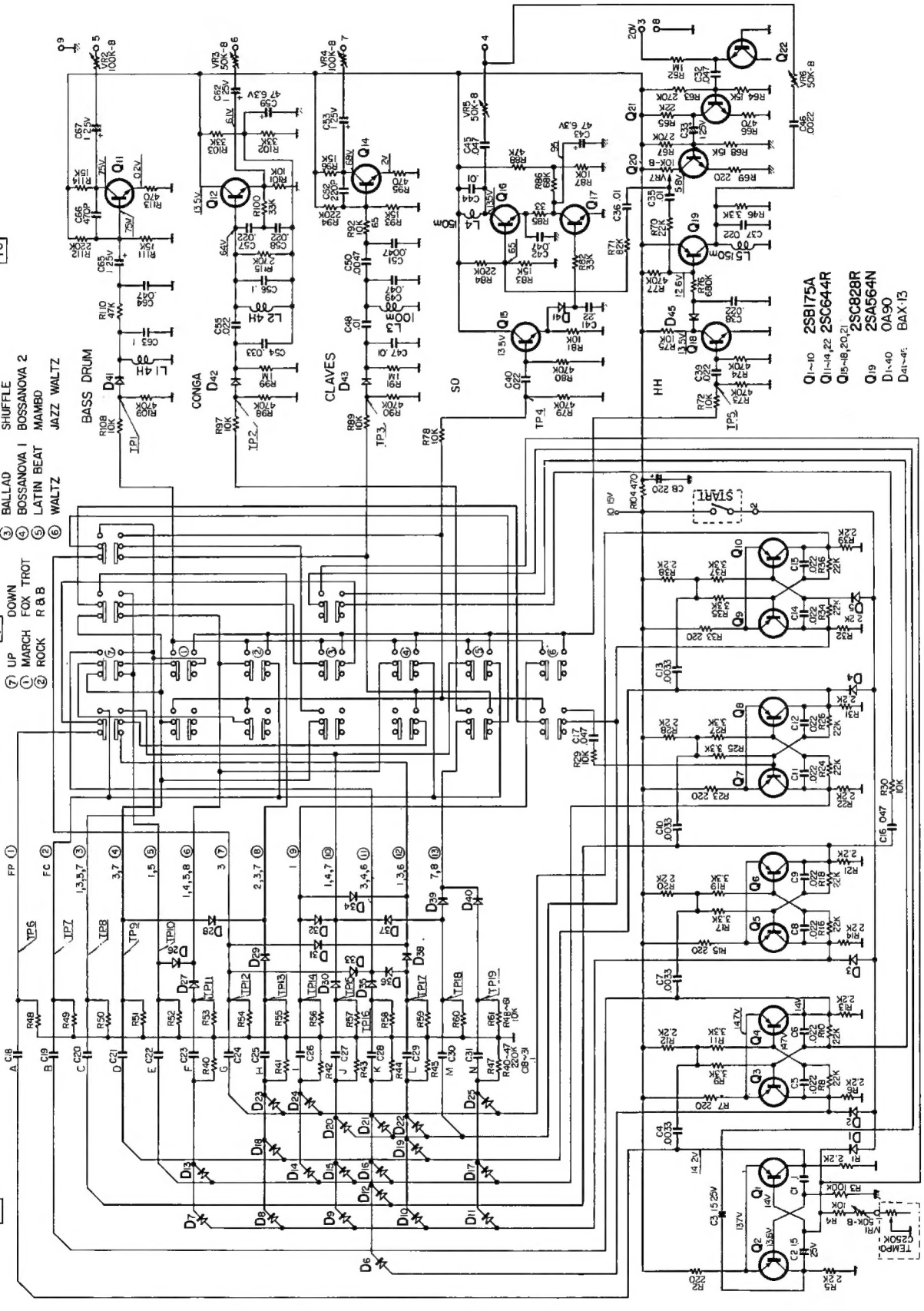
## TIMER SECTION:

2 hours

## GENERAL:

**SWITCHES:** SPEAKERS: A, B, C, D.
SELECTOR: AM, FM AUTO, PHONO 1, PHONO 2, AUX 1, AUX 2, RHYTHM.
POWER LIMITER: 50 watts, 100 watts, Full Power.
MODE SWITCHES: STEREO-MONO, NORMAL-REVERSE
TAPE MONITOR A: SOURCE, PLAY
TAPE MONITOR B: SOURCE, PLAY
AUDIO MUTING: ON (−20 dB), OFF
FM MUTING: ON, OFF
LOW FILTER: ON, OFF
HIGH FILTER: ON, OFF
POWER METER: LOW, HIGH
PRE OUT: NORMAL, REVERB (Front)
PRE OUT-MAIN IN: NORMAL, SEPARATE (Rear)
(for Separate Use of Pre and Main Amplifier)
OTHERS: B PHONES LEVEL
MIC LEVEL
GUITAR JACK (L, R)
MIC JACK (L, R)
PHONES JACK (A, B)
OUTPUT TERMINALS (Front)
PRE OUT – MAIN IN TERMINALS (Rear)
AC OUTLETS: SWITCHED 1
UNSWITCHED 2
POWER CONSUMPTION:
at full power: 240 watts
at no signal: 45 watts
DIMENSIONS: W 21-3/4" x H 6-3/4" x D 16-1/4"
WEIGHT: 29 lbs (16 kg)
ACCESSORY PARTS: Dynamic MIC
WALNUT CABINET: Yes

# ● RHYTHM SCHEMATIC DIAGRAM



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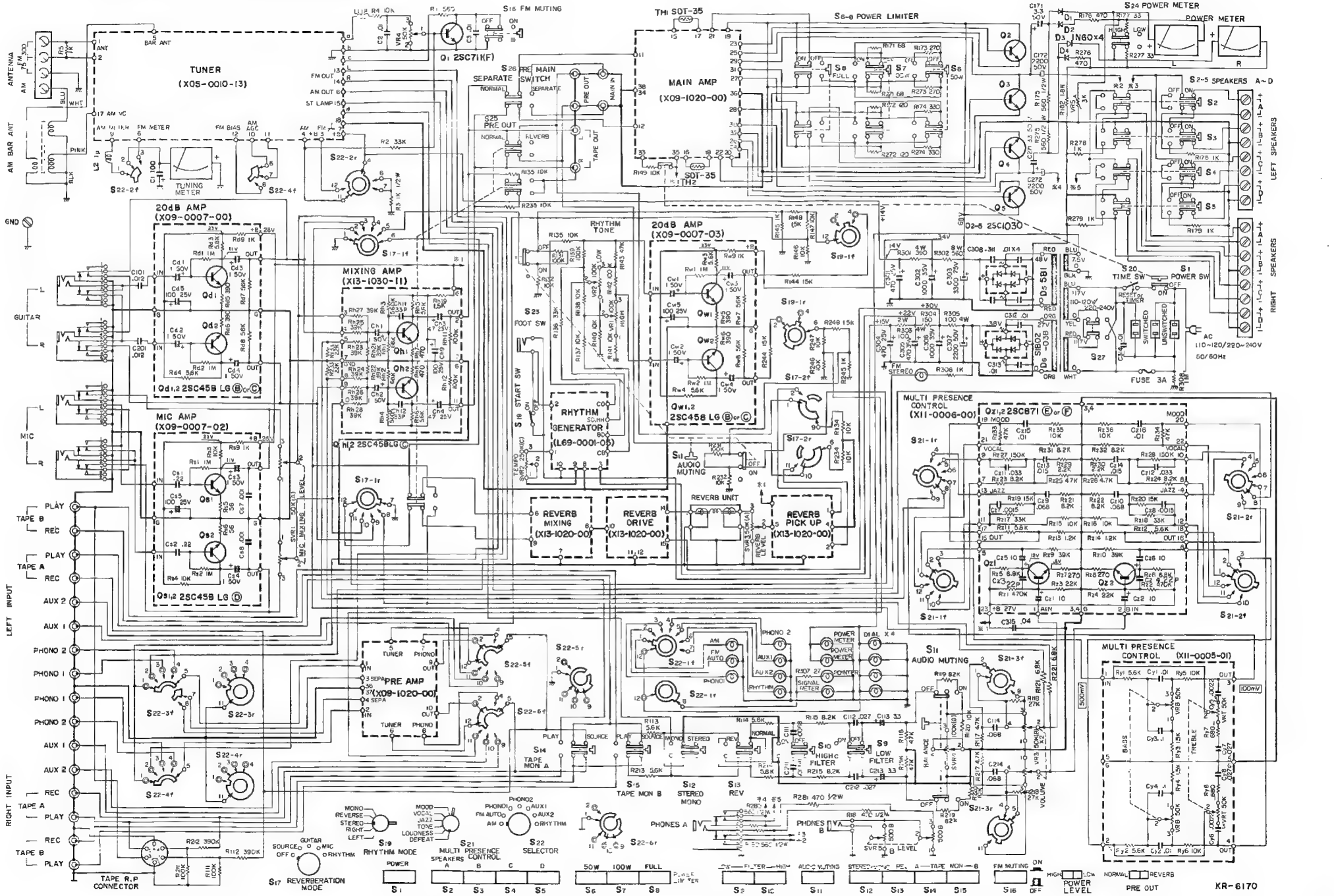
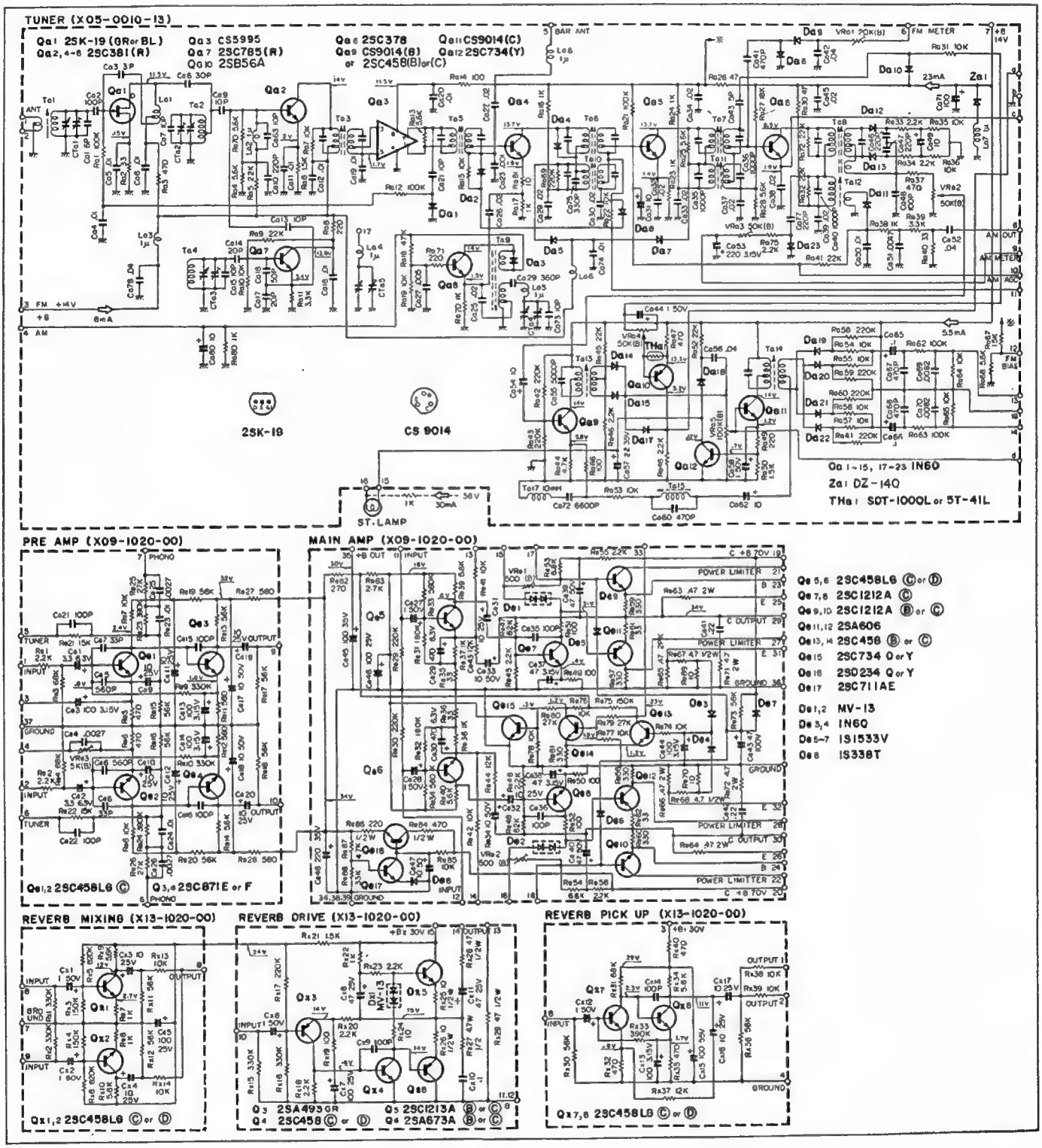





1971 e 9 PRINTED IN JAPAN B52-0101-00 (KUPMTW) (R)

# ● PARTS LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| | | **UNIT** | | | | |
| — | X05-0010-13 | TUNER unit | | | | |
| — | X09-0007-00 | GUITAR AMP unit | | | | |
| — | X09-0007-02 | MIC AMP unit | | | | |
| — | X09-0007-03 | RHYTHM AMP unit | | | | |
| — | X09-1020-00 | PRE & MAIN unit | | | | |
| — | X11-0005-01 | MULTI PRESENCE unit | | | | |
| — | X11-0006-00 | MULTI PRESENCE unit | | | | |
| — | X13-1020-00 | REVERB AMP unit | | | | |
| — | X13-1030-11 | MIXING AMP unit | | | | |
| — | L69-0001-05 | RHYTHM GENERATOR unit | | | | |
| | | **CAPACITOR** | | | | |
| C1 | CE04W0F101 | PC electrolytic | 100μF | 3.15WV | | |
| C2, 3 | CK94YY1H103M | Ceramic | 0.01μF | ±20% | | |
| C101 | CQ92M1H123M | Mylar | 0.012μF | ±20% | | |
| C111 | CQ92M1H682M | Mylar | 0.0068μF | ±20% | | |
| C112 | CQ92M1H273M | Mylar | 0.027μF | ±20% | | |
| C113 | CE04W1H3R3 | PC electrolytic | 3.3μF | 50WV | | |
| C114 | CQ92M1H683M | Mylar | 0.068μF | ±20% | | |
| C171 | CE04W1H3R3 | PC electrolytic | 3.3μF | 50WV | | |
| C172 | CE62AW1H222 | Electrolytic block | 2200μF | 50WV | | |
| C201 | CQ92M1H123M | Mylar | 0.012μF | ±20% | | |
| C211 | CQ92M1H682M | Mylar | 0.0068μF | ±20% | | |
| C212 | CQ92M1H273M | Mylar | 0.027μF | ±20% | | |
| C213 | CE04W1H3R3 | PC electrolytic | 3.3μF | 50WV | | |
| C214 | CQ92M1H683M | Mylar | 0.068μF | ±20% | | |
| C271 | CE04W1H3R3 | PC electrolytic | 3.3μF | 50WV | | |
| C272 | CE62AW1H222 | Electrolytic block | 2200μF | 50WV | | |
| C301 | CE02W1E471 | Electrolytic tubular | 470μF | 25WV | | |
| C302 | CE02W1V102 | Electrolytic tubular | 1000μF | 35WV | | |
| C303 | CE62AW1K332 | Electrolytic block | 3300μF | 75WV | | |
| C304 | CE02W1E471 | Electrolytic tubular | 470μF | 25WV | | |
| C305 | CE02W1V471 | Electrolytic tubular | 470μF | 35WV | | |
| C306 | CE02W1V102 | Electrolytic tubular | 1000μF | 35WV | | |
| C307 | CE62AW1H222 | Electrolytic block | 2200μF | 50WV | | |
| C308～313 | CP02B2J103M | Oil filled | 0.01μF | ±20% | | |
| C314 | C90-0036-05 | Oil filled (UL, CSA) | 0.01μF | ±20% | | |
| C315 | CK94YX1H403M | Ceramic | 0.04μF | ±20% | | |
| | | **RESISTOR** | | | | |
| R1 | PD14BY2E561J | Insulated carbon film | 560Ω | ±5% | 1/4W | |
| R2 | PD14BY2E333J | Insulated carbon film | 33kΩ | ±5% | 1/4W | |
| R3 | RC05GF2H102K | Carbon composition | 1kΩ | ±10% | 1/2W | |
| R4 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R5 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| R111 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| R112 | PD14BY2E394J | Insulated carbon film | 390kΩ | ±5% | 1/4W | |
| R113, 114 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| R115 | PD14BY2E822J | Insulated carbon film | 8.2kΩ | ±5% | 1/4W | |
| R116 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W | |
| R117 | PD14BY2E472J | Insulated carbon film | 4.7kΩ | ±5% | 1/4W | |
| R118 | PD14BY2E273J | Insulated carbon film | 27kΩ | ±5% | 1/4W | |
| R119 | PD14BY2E823J | Insulated carbon film | 82kΩ | ±5% | 1/4W | |
| R120 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R121 | PD14BY2E682J | Insulated carbon film | 6.8kΩ | ±5% | 1/4W | |
| R131 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |

# ● PARTS LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| R132 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R133 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W | |
| R134, 135 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R136 | PD14BY2E333J | Insulated carbon film | 33kΩ | ±5% | 1/4W | |
| R137, 138 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R139 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| R140, 141 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R142 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| R143 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W | |
| R144 | PD14BY2E153J | Insulated carbon film | 15kΩ | ±5% | 1/4W | |
| R145 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| R146, 147 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R148 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W | |
| R149 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R171 | PD14BY2E680J | Insulated carbon film | 68Ω | ±5% | 1/4W | |
| R172 | PD14BY2E121J | Insulated carbon film | 120Ω | ±5% | 1/4W | |
| R173 | PD14BY2E271J | Insulated carbon film | 270Ω | ±5% | 1/4W | |
| R174 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W | |
| R175 | RC05GF2H561J | Carbon composition | 560Ω | ±5% | 1/4W | |
| R176 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| R177 | PD14BY2E330J | Insulated carbon film | 33Ω | ±5% | 1/4W | |
| R178, 179 | RC05GF2H102K | Carbon composition | 1kΩ | ±10% | 1/2W | |
| R180 | RC05GF2H561J | Carbon composition | 560Ω | ±5% | 1/2W | |
| R181 | RC05GF2H471J | Carbon composition | 470Ω | ±5% | 1/2W | |
| R182 | PD14BY2E182J | Insulated carbon film | 1.8kΩ | ±5% | 1/4W | |
| R211 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| R212 | PD14BY2E394J | Insulated carbon film | 390kΩ | ±5% | 1/4W | |
| R213, 214 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| R215 | PD14BY2E822J | Insulated carbon film | 8.2kΩ | ±5% | 1/4W | |
| R216 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W | |
| R217 | PD14BY2E472J | Insulated carbon film | 4.7kΩ | ±5% | 1/4W | |
| R218 | PD14BY2E273J | Insulated carbon film | 27kΩ | ±5% | 1/4W | |
| R219 | PD14BY2E823J | Insulated carbon film | 82kΩ | ±5% | 1/4W | |
| R220 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R221 | PD14BY2E682J | Insulated carbon film | 6.8kΩ | ±5% | 1/4W | |
| R231 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| R232 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R233 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W | |
| R234, 235 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R244 | PD14BY2E153J | Insulated carbon film | 15kΩ | ±5% | 1/4W | |
| R245 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| R246, 247 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| R248 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W | |
| R271 | PD14BY2E680J | Insulated carbon film | 68Ω | ±5% | 1/4W | |
| R272 | PD14BY2E121J | Insulated carbon film | 120Ω | ±5% | 1/4W | |
| R273 | PD14BY2E271J | Insulated carbon film | 270Ω | ±5% | 1/4W | |
| R274 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W | |
| R275 | RC05GF2H561J | Carbon composition | 560Ω | ±5% | 1/2W | |
| R276 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| R277 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W | |
| R278, 279 | RC05GF2H102K | Carbon composition | 1kΩ | ±10% | 1/2W | |
| R280 | RC05GF2H561J | Carbon composition | 560Ω | ±5% | 1/2W | |
| R281 | RC05GF2H471J | Carbon composition | 470Ω | ±5% | 1/2W | |
| R301 | RW14AG3G391J | Wire wound | 390Ω | ±5% | 4W | |
| R302 | RW14AG3K561J | Wire wound | 560Ω | ±5% | 8W | |
| R303 | RW14AG3D101J | Wire wound | 100Ω | ±5% | 2W | |

# ● PARTS LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| R304 | RW14AG3G151J | Wire wound | 150Ω | ±5% | 4W | |
| R305 | RW14AG3G101J | Wire wound | 100Ω | ±5% | 4W | |
| R306 | RW14AG3D101J | Wire wound | 100Ω | ±5% | 2W | |
| R307 | RC05GF2H270K | Carbon composition | 27Ω | ±5% | 1/2W | |
| R308 | RC05GF2H105K | Carbon composition | 1MΩ | ±10% | 1/2W | |
| | | **POTENTIOMETER** | | | | |
| VR1 | R01-5006-05 | HIGH RHYTHM TONE | 100kΩ (B) | | | |
| VR2 | R01-5006-05 | LOW RHYTHM TONE | 100kΩ (B) | | | |
| VR3 | R01-4004-05 | VOLUME | 50kΩ (B) dual | | | |
| VR4 | R12-4015-05 | PC trimmer potentiometer | 50kΩ | | | |
| VR5 | R12-1016-05 | PC trimmer potentiometer | 3kΩ | | | |
| SVR1 | R13-4008-05 | MIXING LEVEL | 50kΩ (A) slide 2-gang | | | |
| SVR2 | R13-6002-05 | TEMPO | 250kΩ (C) slide | | | |
| SVR3 | R13-4007-05 | REVERB LEVEL | 50kΩ (A) slide | | | |
| SVR4 | R13-5001-05 | BALANCE | 100kΩ (G) slide | | | |
| SVR5 | R13-0001-05 | PHONES LEVEL | 500Ω (B) slide 2-gang | | | |
| | | **SWITCH** | | | | |
| S1 | S41-8001-05 | POWER | (eight-pushbutton A) | | | |
| S2 | S41-8001-05 | SPEAKERS A | (eight-pushbutton A) | | | |
| S3 | S41-8001-05 | SPEAKERS B | (eight-pushbutton A) | | | |
| S4 | S41-8001-05 | SPEAKERS C | (eight-pushbutton A) | | | |
| S5 | S41-8001-05 | SPEAKERS D | (eight-pushbutton A) | | | |
| S6 | S41-8001-05 | 50W POWER LIMITER | (eight-pushbutton A) | | | |
| S7 | S41-8001-05 | 100W POWER LIMITER | (eight-pushbutton A) | | | |
| S8 | S41-8001-05 | FULL POWER | (eight-pushbutton A) | | | |
| S9 | S41-8002-05 | LOW FILTER | (eight-pushbutton B) | | | |
| S10 | S41-8002-05 | HIGH FILTER | (eight-pushbutton B) | | | |
| S11 | S41-8002-05 | AUDIO MUTING | (eight-pushbutton B) | | | |
| S12 | S41-8002-05 | STEREO/MONO | (eight-pushbutton B) | | | |
| S13 | S41-8002-05 | REV. | (eight-pushbutton B) | | | |
| S14 | S41-8002-05 | TAPE MONITOR A | (eight-pushbutton B) | | | |
| S15 | S41-8002-05 | TAPE MONITOR B | (eight-pushbutton B) | | | |
| S16 | S41-8002-05 | FM MUTING | (eight-pushbutton B) | | | |
| S17 | S01-2008-05 | REVERB MODE (rotary) F · 2 · 6 · 5 | | | | |
| S18 | S40-1001-05 | RHYTHM SELECTOR | | | | |
| S19 | S01-1009-05 | RHYTHM MODE (rotary) F · 1 · 2 · 5 | | | | |
| S20 | S59-1025-05 | TIMER | | | | |
| S21 | S01-3006-05 | MULTI PRESENCE TONE (rotary) F · 3 · 6 · 6 | | | | |
| S22 | S01-6001-05 | SELECTOR (rotary) F · 6 · 15 · 7 | | | | |
| S23 | Y15-1000-80 | FOOT SW | | | | |
| S24 | S31-6005-05 | VU LEVEL (slide) | | | | |
| S25 | S31-6005-05 | PRE OUT (slide) | | | | |
| S26 | S31-2007-05 | PRE/MAIN SEPARATE SW (slide) | | | | |
| S27 | S31-2004-05 | VOLTAGE SELECTOR (slide) | | | | |
| S28 | S36-1001-05 | START SW (lever) | | | | |
| | | **TRANSISTOR/DIODE/THERMISTOR** | | | | |
| Q1 | | 2SC711(F) | | | | |
| Q2～5 | | 2SC1030 | | | | |
| D1～4 | | 1N60 | | | | |
| D5 | | 5B1 | | | | |
| D6 | | S1B02-03B | | | | |
| TH1, 2 | | SDT-35 | | | | |
| | | **MISCELLANEOUS** | | | | |
| — | A03-0078-22 | Cabinet | | | | |

# ● PARTS LIST

| Circuit No. | Parts No. | Description | Remarks |
|---|---|---|---|
| — | A10-0260-11 | Chassis | |
| — | A20-0408-21 | Panel | |
| — | A21-0066-22 | Ornamental plate | |
| — | A22-0100-11 | Sub panel | |
| — | A23-0221-01 | Rear panel | |
| — | A33-0014-03 | Reflector | |
| — | A42-0007-12 | Bottom plate | |
| — | A70-0055-23 | Panel assembly | |
| | | | |
| — | B01-0049-04 | Left side escutcheon | |
| — | B01-0050-04 | Right side escutcheon | |
| — | B04-0033-04 | Screen | |
| — | B04-0035-04 | Screen | |
| — | B08-2010-04 | Indicator (blue) | |
| — | B10-0058-02 | Front glass | |
| — | B19-0104-03 | Filter | |
| — | B20-0201-03 | Dial calibrations | |
| — | B21-4006-05 | Dial pointer assembly | |
| P.L | B30-0015-15 | Fuse type pilot lamp | |
| P.L | B30-0026-15 | STEREO indicator (30mA, 8V) | |
| P.L | B30-0039-05 | Pilot lamp (50mA, 8V) | |
| M | B31-0006-05 | Signal meter | |
| M | B31-0119-05 | VU meter | |
| — | B40-0504-04 | Destination plate (P) | |
| — | B41-0105-04 | Power voltage plate (P) | |
| — | B41-0110-04 | Voltage selector catuion card (P) | |
| — | B42-0009-04 | Passed sticker | |
| — | B42-0046-14 | UL caution card (K) | |
| — | B42-0161-04 | Loopstick antenna caution sticker | |
| — | B42-0219-04 | UL caution card (K) | |
| — | B42-0267-04 | UL caution card (K, U) | |
| — | B46-0002-00 | Warranty card (K, U) | |
| — | B46-0003-00 | Warranty card (U) | |
| — | B46-0021-00 | Warranty card (P) | |
| — | B47-0029-04 | TIMER caution card | |
| — | B47-0032-04 | REVERB CRAMP caution card | |
| — | B50-0667-00 | Instruction manual (K, P) | |
| — | B50-0668-00 | Instruction manual (U) | |
| — | B52-0101-00 | Schematic diagram | |
| — | B58-0003-00 | Power supply caution card (U) | |
| — | B58-0043-00 | Carton case caution card (K, P) | |
| — | B58-0101-00 | Voltage selector caution card (U) | |
| — | B58-0114-04 | Voltage selector caution card (P) | |
| — | B58-0125-00 | Caution card | |
| — | B59-0018-00 | KENWOOD service stations lists (U) | |
| — | | | |
| — | D01-0009-05 | Flywheel | |
| — | D15-0037-04 | Small pulley | |
| — | D15-0038-04 | Pulley | |
| — | D15-0073-04 | Pulley x 4 | |
| — | D20-0087-03 | Dial shaft | |
| — | D21-0182-03 | Shaft | |
| — | D22-0018-05 | Shaft coupling | |
| — | D23-0060-04 | Shaft bearing | |
| — | D32-0021-04 | Switch stopper | |
| | | | |
| — | E02-0207-05 | Transistor socket | |

# ● PARTS LIST

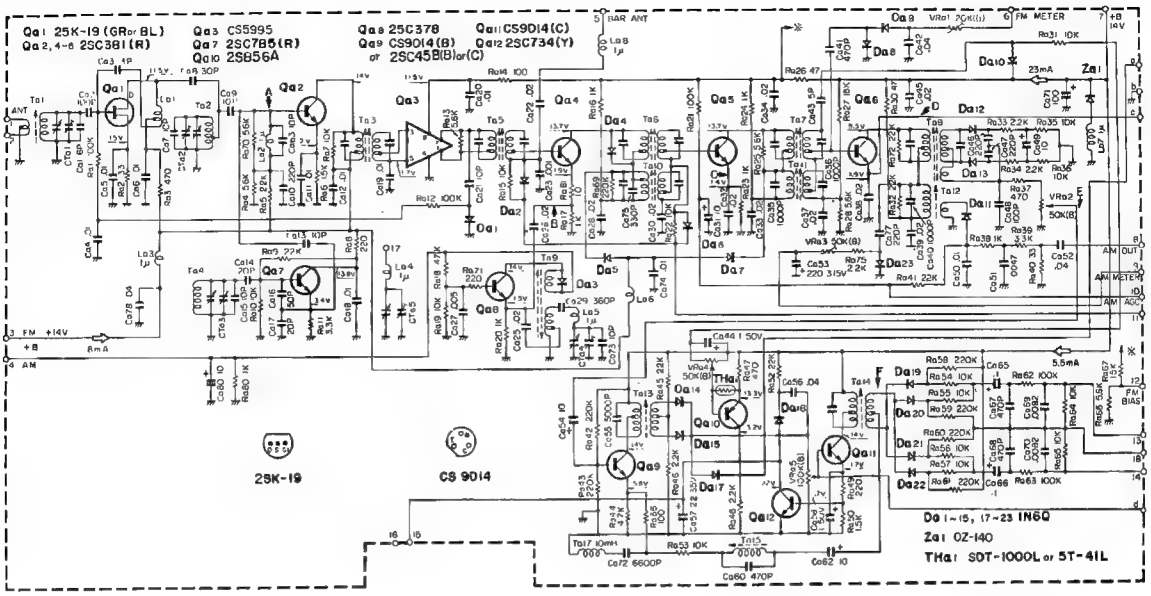
| Circuit No. | Parts No. | Description | Remarks |
|---|---|---|---|
| — | E05-0203-05 | Power plug (W) | |
| — | E08-0205-05 | AC outlet | |
| J | E08-0217-05 | Foot switch jack | |
| J | E11-0002-05 | Phone jack (A) | |
| J | E11-0044-05 | Phone jack | |
| J | E11-0048-05 | Phone jack x 4 | |
| J | E13-0205-05 | 2P pin jack | |
| J | E13-0401-05 | 4P pin jack (TAPE A) | |
| J | E13-0404-05 | 4P pin jack | |
| J | E13-0408-05 | 4P pin jack (TAPE B) | |
| J | E13-0802-05 | 8P pin jack | |
| — | E20-0418-03 | 4P terminal strips | |
| — | E20-0807-03 | 8P terminal strips | |
| — | E30-0046-05 | Power cord (K, U, P) | |
| — | F01-0069-03 | Head sink | |
| F | F05-3022-05<br>or<br>F05-3024-05 | Fuse (3A) | |
| — | F10-0205-04 | Shield plate | |
| — | F10-0232-04 | Shield plate | |
| — | F11-0141-04 | Reflector box | |
| — | F30-0020-04 | Bottom plate armature | |
| — | F31-0059-04 | Armature | |
| — | F31-0060-04 | Chassis armature | |
| — | F31-0061-04 | Chassis armature | |
| — | G01-0045-14 | Dial spring | |
| — | G01-0049-14 | Dial spring x 5 | |
| — | G13-0047-04 | Reverb cushion | |
| — | G13-0050-04 | Dial stopper | |
| — | G13-0051-04 | Dial stopper | |
| — | H01-0648-04 | Carton Case (K, U, P) | |
| — | H03-0047-04 | Carton case (K, P) | |
| — | J02-0049-14 | Legs | |
| — | J13-0016-15 | Fuse holder | |
| — | J13-0023-05 | Fuse holder x 7 | |
| — | J19-0147-03 | Meter stopper | |
| — | J19-0148-04 | Dial stopper | |
| — | J19-0149-03 | Push switch stopper | |
| — | J19-0150-04 | Push switch stopper | |
| — | J19-0160-04 | Dial stopper | |
| — | J20-0181-03 | Switch stopper | |
| — | J21-0192-04 | Amp. hardware | |
| — | J21-0480-13 | Antenna stopper | |
| — | J21-0798-04 | Pilot lamp hardware | |
| — | J21-0799-04 | Pulley hardware | |
| — | J21-0800-03 | Reverb hardware (A) | |
| — | J21-0801-03 | Reverb hardware (B) | |
| — | J21-0801-04 | Reverb hardware (C) | |
| — | J21-0546-04 | Thermistor holder | |
| — | J21-0682-04 | PC board hardware | |
| — | J25-0564-02 | PC board (push switch with power) | |
| — | J25-0565-02 | PC board (push switch) | |

# ● PARTS LIST

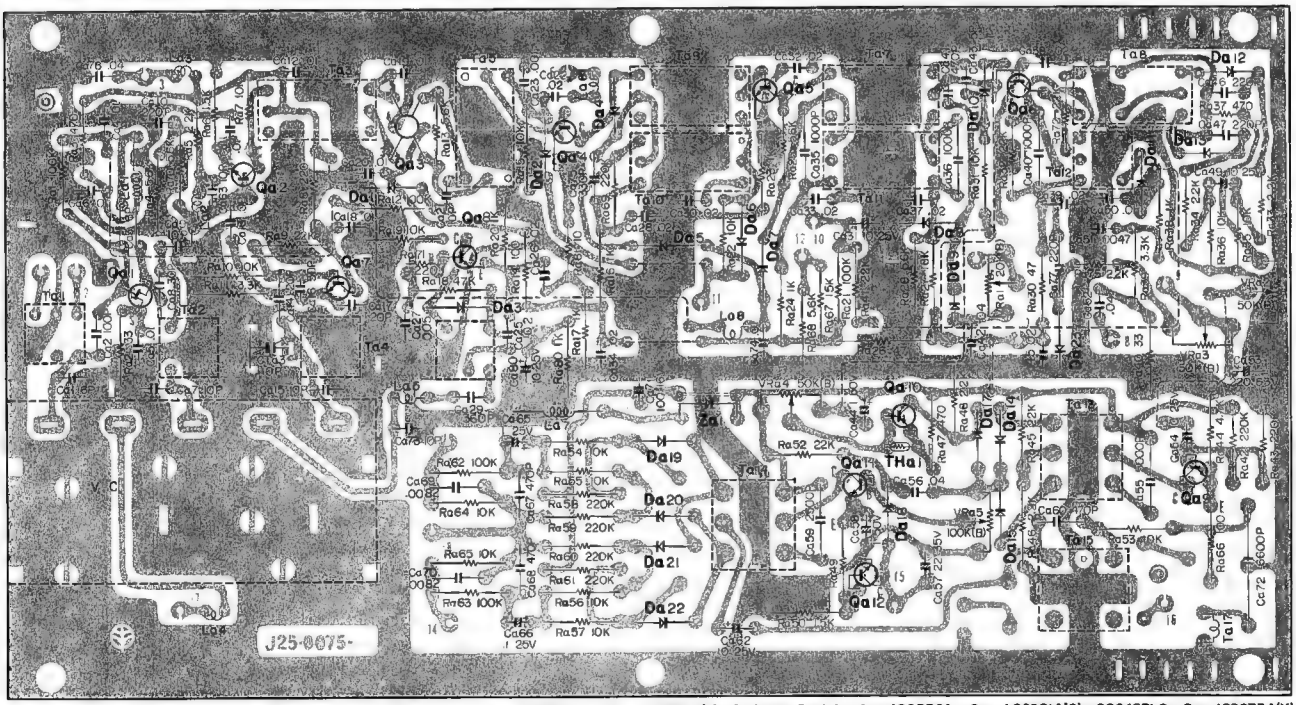
| Circuit No. | Parts No. | Description | Remarks |
|---|---|---|---|
| – | J25-0566-04 | PC board (FM MUTING) | |
| – | J25-0574-04 | PC board (FM MUTING) | |
| | | | |
| – | K23-0049-03 | Knob (VOLUME, SELECTOR) | |
| – | K23-0050-03 | Knob (REVERB MODE) | |
| – | K23-0051-14 | Knob (BALANCE, TEMPO, REVERB LEVEL) | |
| – | K23-0061-04 | Knob (RHYTHM TONE, BASS, TREBLE) | |
| – | K23-0068-03 | Knob (TIMER) | |
| – | K23-0069-04 | Knob (RHYTHM MODE, MULTIPRESENCE, CONTROL SELECTOR) | |
| – | K23-0070-03 | Knob (TUNING) | |
| – | K29-0020-14 | Knob (REVERB CRAMP, PHONES LEVEL, MIC LEVEL) | |
| – | K29-0073-04 | Knob (START SW) | |
| | | | |
| P.T | L03-0047-05 | Power transformer (47V-2.2A, 27V-0.4A, 7.5V-2.8A) | |
| L1, 2 | L15-0009-05 | Choke coil (4H) in RHYTHM GENERATOR | |
| L3 | L15-0010-05 | Choke coil (100mH) in RHYTHM GENERATOR | |
| L1, 2 | L33-0086-05 | Ferri-inductor (1μH) | |
| | | | |
| – | T29-0003-05 | Reverbration unit | |
| ANT | T90-0002-05 | FM indoor antenna | |
| ANT | T90-0026-05 | Loopstick antenna | |
| MIC | T91-0016-05 | Microphone | |

* In America add to the parts of (K), in Canada do to that of (P), and in other area do to that of (U).

## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS

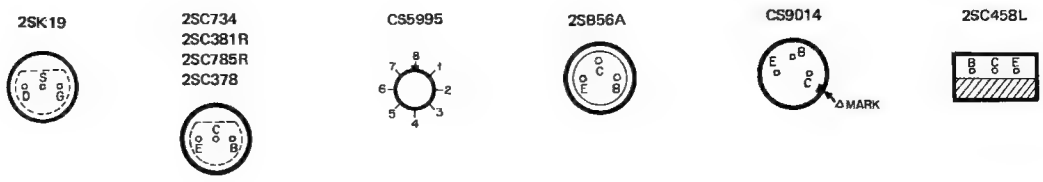



## SCHEMATIC DIAGRAM



Qa1 : 2SK19(GRorBL), Qa2,4~6 : 2SC381(R), Qa3 : CS5995(RorB), Qa7 : 2SC785(R), Qa9 : CS9014(B)or2SC458LBorLC, Qa10 : 2SB56A, Qa11 : CS9014(C)or2SC458LC, Qa12 : 2SC734(Y)
Da1,2,4~15,17~23 : IN60orIN34A, Za1 : ZB1-14, THa1 : SDT-1000Lor5T-41L

BOTTOM VIEW OF TRANSISTOR



## PARTS DESCRIPTION LIST

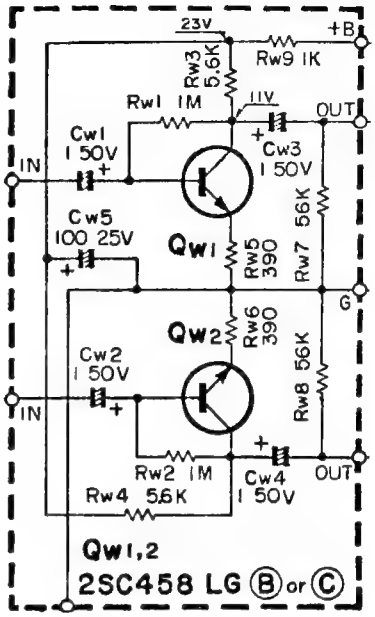
| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| **CAPACITOR** | | | | | | |
| Ca1 | CC94SL1H060D | TC ceramic | 6pF | ±0.5pF | | |
| Ca2 | CC94SL1H101K | TC ceramic | 100pF | ±10% | | |
| Ca3 | CC94SL1H030C | TC ceramic | 3pF | ±0.25pF | | |
| Ca4~6 | CK94YG1E103Z | Ceramic | 0.01μF | +80%, | −20% | |
| Ca7 | CC94TH1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca8 | CC94SH1H300K | TC ceramic | 30pF | ±10% | | |
| Ca9 | CC94SL1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca10 | CC94YX1H221K | TC ceramic | 220pF | ±10% | | |
| Ca11, 12 | CK94YG1E103Z | Ceramic | 0.01μF | +80%, | −20% | |
| Ca13 | CC94TH1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca14 | CC94RG1H200K | TC ceramic | 20pF | ±10% | | |
| Ca15 | CC94SG1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca16 | CC94TH1H500K | TC ceramic | 50pF | ±10% | | |
| Ca17 | CC94TH1H200K | TC ceramic | 20pF | ±10% | | |
| Ca18~20 | CK94YG1E103Z | Ceramic | 0.01μF | +80%, | −20% | |
| Ca21 | CC94SL1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca22 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca23 | CK94YY1H102M | Ceramic | 0.001μF | ±20% | | |
| Ca25, 26 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca27 | CK94YG1E502Z | Ceramic | 0.005μF | +80%, | −20% | |
| Ca28 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca29 | CK94YX1H361K | Ceramic | 360pF | ±10% | | |
| Ca30 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca31 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Ca32~34 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca35, 36 | CQ08S2B102J | Polystyrene | 1000pF | ±5% | | |
| Ca37~39 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca40 | CQ08S2B102J | Polystyrene | 1000pF | ±5% | | |
| Ca41 | CK94YX1H471K | Ceramic | 470pF | ±10% | | |
| Ca42 | CK94YG1E403Z | Ceramic | 0.04μF | +80%, | −20% | |
| Ca43 | CC94SL1H050D | TC ceramic | 5pF | ±0.5pF | | |
| Ca44 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Ca45 | CK94YG1E203Z | Ceramic | 0.02μF | +80%, | −20% | |
| Ca46, 47 | CC94SL1H221K | TC ceramic | 220pF | ±10% | | |
| Ca48 | CC94SL1H101K | TC ceramic | 100pF | ±10% | | |
| Ca49 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Ca50 | CK94YY1H103M | Ceramic | 0.01μF | ±20% | | |
| Ca51 | CK94YY1H472M | Ceramic | 0.047μF | ±20% | | |
| Ca52 | CK94YG1E403Z | Ceramic | 0.04μF | +80%, | −20% | |
| Ca53 | CE04W0J221 | PC electrolytic | 220μF | 6.3WV | | |
| Ca54 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Ca55 | CQ08S2B502J | Polystyrene | 5000pF | ±5% | | |
| Ca56 | CK94YG1E403Z | Ceramic | 0.04μF | +80%, | −20% | |
| Ca57 | CE04W1V220 | PC electrolytic | 22μF | 35WV | | |
| Ca58 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Ca59 | CQ08S2B252J | Polystyrene | 2500pF | ±5% | | |
| Ca60 | CM93D1H471J(Z) | Polystyrene | 470pF | ±5% | | |
| Ca62 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Ca63 | CC94SL1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca65, 66 | CA06E1E410M | Solid aluminum | 0.1μF | 25WV | | |
| Ca67, 68 | CK94YX1H471K | Ceramic | 470pF | ±10% | | |
| Ca69, 70 | CQ93M1H822J | Mylar | 0.0082μF | ±5% | | |
| Ca71 | CE04W1C101 | PC electrolytic | 100μF | 16WV | | |
| Ca72 | CQ08S2B662J | Polystyrene | 6600pF | ±5% | | |
| Ca73 | CC94TH1H100D | TC ceramic | 10pF | ±0.5pF | | |
| Ca74 | CK94YY1H103M | Ceramic | 0.01μF | ±20% | | |
| Ca75 | CM93D1H331J(Z) | Polystyrene | 330pF | ±5% | | |
| Ca77 | CC94SL1H221K | TC ceramic | 220pF | ±10% | | |
| Ca78 | CK94YG1E403Z | Ceramic | 0.04μF | +80%, | −20% | |
| Ca80 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| CTa3 | C05-0010-05 | Ceramic trimmer (10P) | | | | |
| **RESISTOR** | | | | | | |
| Ra1 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| Ra2 | PD14BY2E330J | Insulated carbon film | 33Ω | ±5% | 1/4W | |
| Ra3 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| Ra4 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Ra5 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W | |
| Ra6 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W | |
| Ra7 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ra8 | PD14BY2E221J | Insulated carbon film | 220Ω | ±5% | 1/4W | |
| Ra9 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W | |
| Ra10 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ra11 | PD14BY2E332J | Insulated carbon film | 3.3kΩ | ±5% | 1/4W | |
| Ra12 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| Ra13 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Ra14 | PD14BY2E101J | Insulated carbon film | 100Ω | ±5% | 1/4W | |
| Ra15 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ra16, 17 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| Ra18 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W | |
| Ra19 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ra20 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| Ra21 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W | |
| Ra22 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ra23, 24 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| Ra25 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Ra26 | PD14BY2E470J | Insulated carbon film | 47Ω | ±5% | 1/4W | |
| Ra27 | PD14BY2E183J | Insulated carbon film | 18kΩ | ±5% | 1/4W | |
| Ra28 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |

| Circuit No. | Parts No. | Description | | | |
|---|---|---|---|---|---|
| Ra30 | PD14BY2E470J | Insulated carbon film | 47Ω | ±5% | 1/4W |
| Ra31 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Ra32 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W |
| Ra33, 34 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Ra35, 36 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Ra37 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W |
| Ra38 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W |
| Ra39 | PD14BY2E332J | Insulated carbon film | 3.3kΩ | ±5% | 1/4W |
| Ra40 | PD14BY2E330J | Insulated carbon film | 33Ω | ±5% | 1/4W |
| Ra41 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W |
| Ra42, 43 | PD14BY2E224J | Insulated carbon film | 220kΩ | ±5% | 1/4W |
| Ra44 | PD14BY2E472J | Insulated carbon film | 4.7kΩ | ±5% | 1/4W |
| Ra45 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W |
| Ra46 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Ra47 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W |
| Ra48 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Ra49 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W |
| Ra50 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W |
| Ra52 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W |
| Ra53~57 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Ra58~61 | PD14BY2E224J | Insulated carbon film | 220kΩ | ±5% | 1/4W |
| Ra62, 63 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% | 1/4W |
| Ra64, 65 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Ra66 | PD14BY2E101J | Insulated carbon film | 100Ω | ±5% | 1/4W |
| Ra67 | PD14BY2E153J | Insulated carbon film | 15kΩ | ±5% | 1/4W |
| Ra68 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W |
| Ra69 | PD14BY2E562J | Insulated carbon film | 220kΩ | ±5% | 1/4W |
| Ra70 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W |
| Ra71 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W |
| Ra72 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W |
| Ra75 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Ra80 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W |
| Ra81 | PD14BY2E100J | Insulated carbon film | 10Ω | ±5% | 1/4W |
| **POTENTIOMETER** | | | | | |
| VRa1 | R12-3014-05 | PC trimmer potentiometer | 20kΩ | (B) | |
| VRa2~4 | R12-4006-05 | PC trimmer potentiometer | 50kΩ | (B) | |
| VRa5 | R12-5013-05 | PC trimmer potentiometer | 100kΩ | (B) | |
| **IF TRANSFORMER** | | | | | |
| La1 | L33-0027-05 | Choke coil | | | |
| La2 | L33-0002-04 | Choke coil | | | |
| La3~6 | L33-0086-05 | Ferri-inductor | | | |
| La7 | L33-0025-05 | Choke coil | | | |
| La8 | L33-0086-05 | Ferri-inductor | | | |
| Ta1 | L34-0348-04 | FM ANT coil | | | |
| Ta2 | L34-0056-04 | FM RF coil | | | |
| Ta3 | L30-0150-05 | FM IFT | | | |
| Ta4 | L34-0057-04 | FM OSC coil | | | |
| Ta5 | L30-0151-05 | FM IFT | | | |
| Ta6 | L30-0152-05 | FM IFT | | | |
| Ta7 | L30-0153-05 | FM IFT | | | |
| Ta8 | L30-0137-05 | FM IFT | | | |
| Ta9 | L30-0082-05 | AM OSC | | | |
| Ta10 | L30-0080-05 | AM IFT | | | |
| Ta11 | L30-0081-05 | FM IFT | | | |
| Ta12 | L30-0052-05 | AM IFT | | | |
| Ta13 | L35-0035-05 | 19kHz coil | | | |
| Ta14 | L35-0036-05 | 38kHz coil | | | |
| Ta15 | L35-0030-05 | 72kHz coil | | | |
| Ta17 | L33-0117-05 | Ferri-inductor | | | |
| **FET/IC/TRANSISTOR** | | | | | |
| Qa1 | | 2SK-19 (GR or BL) | | | |
| Qa2 | | 2SC381R | | | |
| Qa3 | | C55995 (R or B) | | | |
| Qa4~6 | | 2SC381R | | | |
| Qa7 | | 2SC785R | | | |
| Qa8 | | 2SC378 | | | |
| Qa9 | | C59014B (2SC458L, B or C) | | | |
| Qa10 | | 2SB56A | | | |
| Qa11 | | C59014C (2SC485L, C) | | | |
| Qa12 | | 2SC734Y | | | |
| **DIODE/THERMISTOR** | | | | | |
| Da1~15, 17~23 | | 1N60 or 1N34A (YELLOW) | | | |
| Za1 | | DZ-140 | | | |
| THa1 | | 5DT-1000L or 5T-41L | | | |
| **MISCELLANEOUS** | | | | | |
| — | J25-0075-12 | PC board | | | |
| V.C. | C01-0137-05 | Variable capacitor | | | |
| — | F10-0048-03 | Shield board A | | | |
| — | F10-0004-04 | Shield board B | | | |
| — | F10-0187-04 | Shield board C | | | |

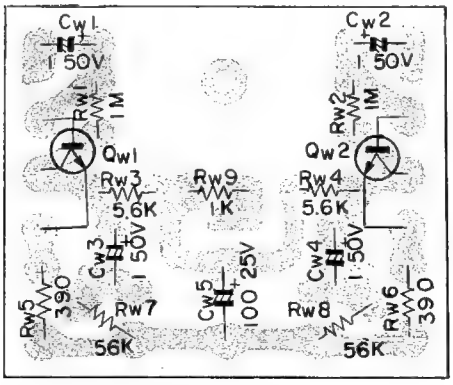
## SCHEMATIC DIAGRAM

BOTTOM VIEW OF TRANSISTOR

2SC458LG


## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS




Qw1, 2 2SC 458LG (B) or (C)

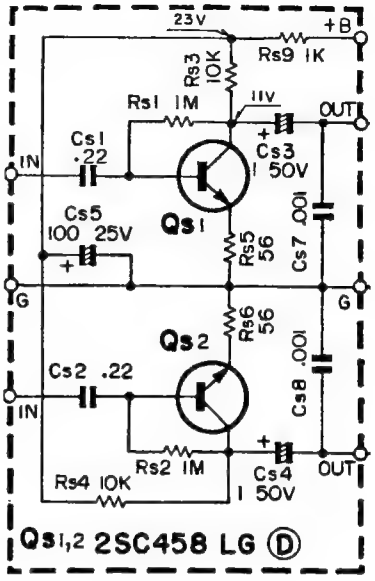
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| | | **CAPACITOR** | | | | |
| Cd(W)1～4 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Cd(W)5 | CE04W1E101 | PC electrolytic | 100μF | 25WV | | |
| | | **RESISTOR** | | | | |
| Rd(W)1, 2 | RC05GF2H105K | Carbon composition | 1MΩ | ±10% | 1/2W | |
| Rd(W)3, 4 | PD14CY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Rd(W)5, 6 | PD14CY2E391J | Insulated carbon film | 390Ω | ±5% | 1/4W | |
| Rd(W)7, 8 | PD14CY2E563K | Insulated carbon film | 56kΩ | ±10% | 1/4W | |
| Rd(W)9 | PD14CY2E102K | Insulated carbon film | 1kΩ | ±10% | 1/4W | |
| | | **TRANSISTOR/PC BOARD** | | | | |
| Qd(S)1, 2 | | 2SC458LG(B) or (C) | | | | |
| — | J25-0079-04 | PC board | | | | |

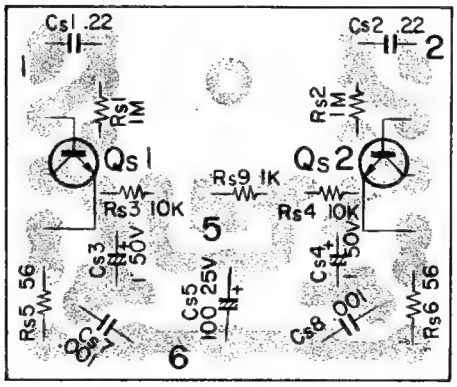
## SCHEMATIC DIAGRAM

BOTTOM VIEW OF TRANSISTOR

2SC458LG


## SEALED CIRCUIT ASSEMBLIES PAHNTOM VIEWS

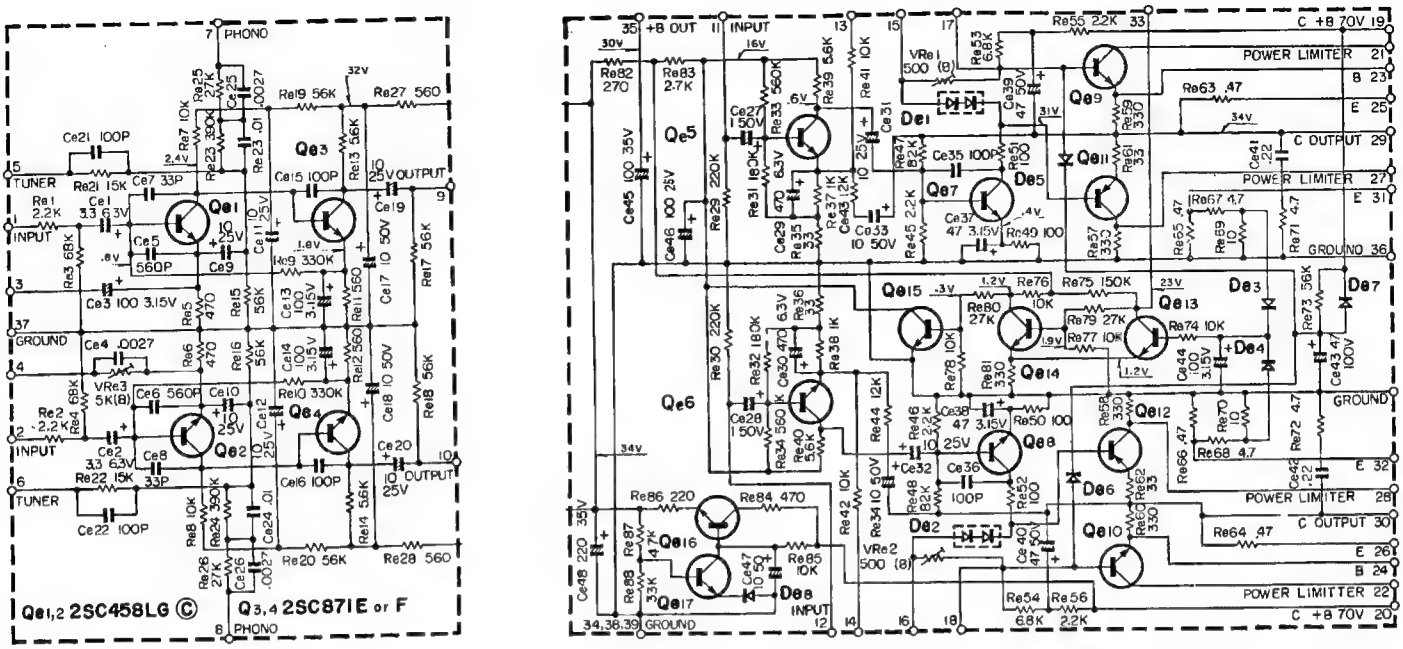



Qs1, 2 2SC458LG (D)

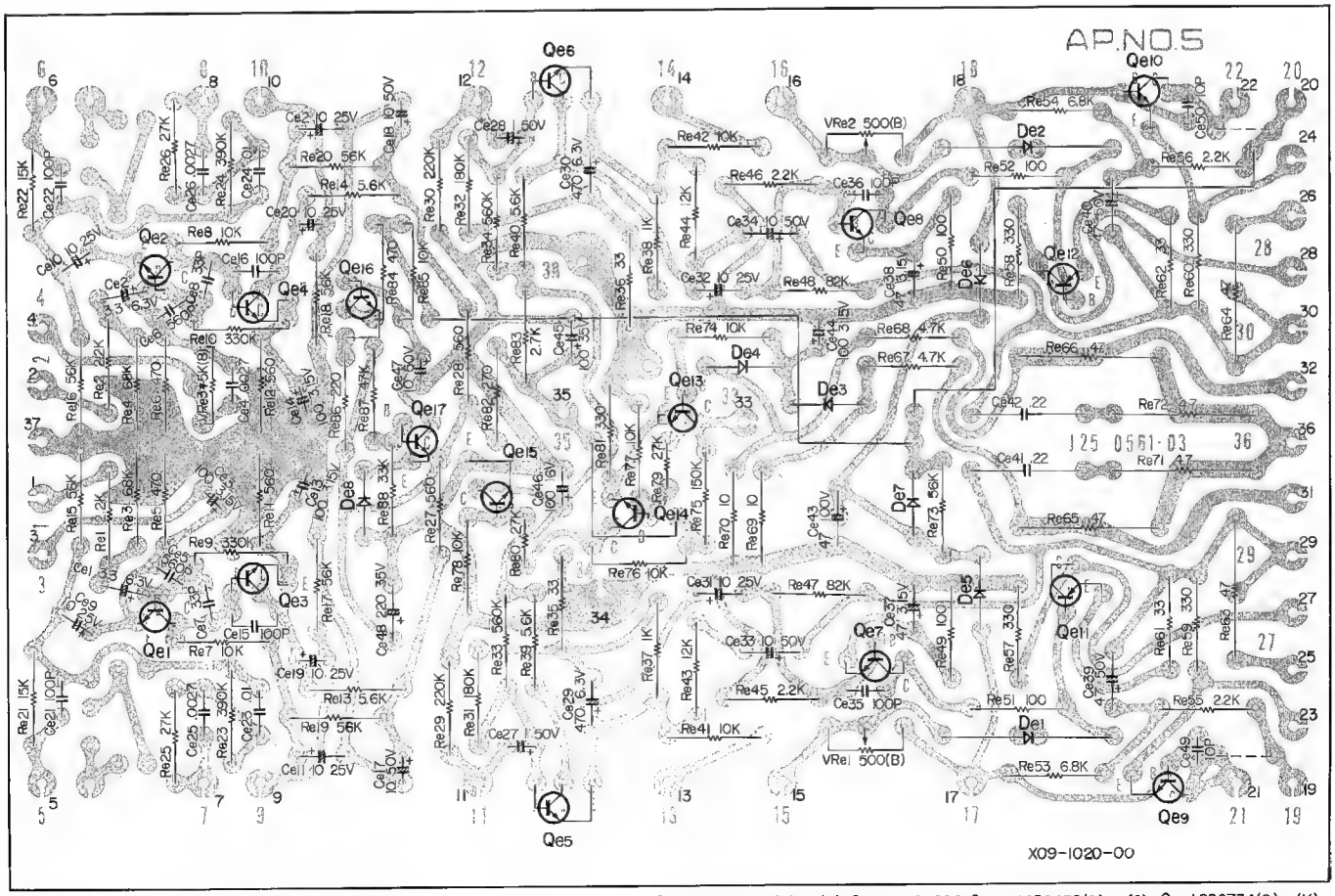
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| | | **CAPACITOR** | | | | |
| Cs1, 2 | CS04D1ER22MorX | Tantalum | 0.22μF | 25WV | | |
| Cs3, 4 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Cs5 | CE04W1E101 | PC electrolytic | 100μF | 25WV | | |
| Cs7, 8 | CK94YY1H102M | Ceramic | 0.001μF | ±20% | | |
| | | **RESISTOR** | | | | |
| Rs1, 2 | RC05GF2H105K | Carbon composition | 1MΩ | ±10% | 1/2W | |
| Rs3, 4 | PD14CY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Rs5, 6 | PD14CY2E560J | Insulated carbon film | 56Ω | ±5% | 1/4W | |
| Rs9 | PD14CY2E102K | Insulated carbon film | 1kΩ | ±10% | 1/4W | |
| | | **TRANSISTOR/PC BOARD** | | | | |
| Qs1, 2 | | 2SC458LG (D) | | | | |
| — | J25-0077-04 | PC board | | | | |

## SCHEMATIC DIAGRAM




## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS

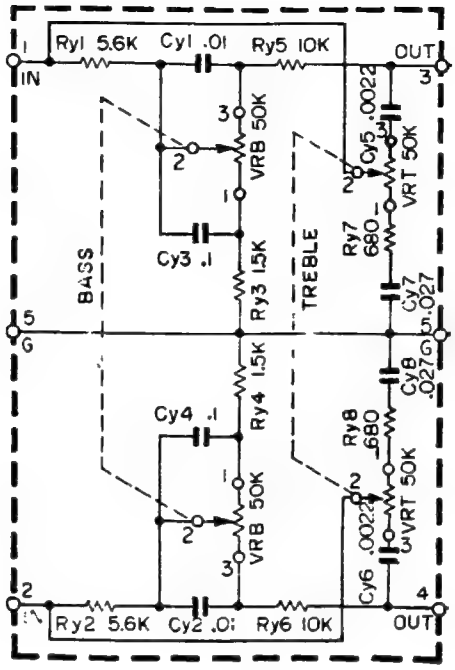



Qe1,2: 2SC458LG(C), Qe3,4: 2SC871E or F, Qe5,6: 2SC458LG(C) or (D), Qe7,8: 2SC1212A(C), Qe9,10: 2SC1212A(B) or (C), Qe11,12: 2SA606, Qe13,14: 2SC458(B) or (C), Qe15: 2SC734(O) or (Y)
Qe16: 2SD234(O) or (Y), Qe17: 2SC711A(E), De1,2: MV-13, De3,4: IN60, De5,6,7: IS1553V, De8: IS338T

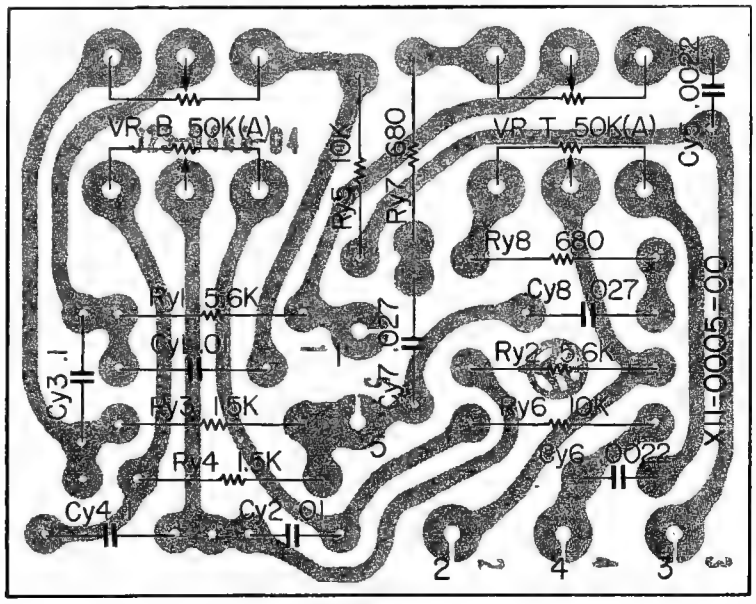
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | Remarks |
|---|---|---|---|---|---|
| **CAPACITOR** | | | | | |
| Ce1, 2 | CS04D0J3R3M | Tantalum | 3.3μF | 6.3WV | |
| Ce3 | CE04W0F101 | PC electrolytic | 100μF | 3.15WV | |
| Ce4 | CQ93M1H272K | Mylar | 0.0027μF | ±10% | |
| Ce5, 6 | CK94YY1H561M | Ceramic | 560pF | ±20% | |
| Ce7, 8 | CC94SL1H330K | TC ceramic | 33pF | ±10% | |
| Ce9～12 | CE04W1E100 | PC electrolytic | 10μF | 25WV | |
| Ce13, 14 | CE04W0F101 | PC electrolytic | 100μF | 3.15WV | |
| Ce15, 16 | CS94SL1H101K | TC ceramic | 100pF | ±10% | |
| Ce17, 18 | CE04W1H100 | PC electrolytic | 10μF | 50WV | |
| Ce19, 20 | CE04W1E100 | PC electrolytic | 10μF | 25WV | |
| Ce21, 22 | CC94SL1H101K | TC ceramic | 100pF | ±10% | |
| Ce23, 24 | CQ93M1H103K | Mylar | 0.01μF | ±10% | |
| Ce25, 26 | CQ93M1H272K | Mylar | 0.0027μF | ±10% | |
| Ce27, 28 | CE04W1H010 | PC electrolytic | 1μF | 50WV | |
| Ce29, 30 | CE04W0J471 | PC electrolytic | 470μF | 6.3WV | |
| Ce31, 32 | CE04W1E100 | PC electrolytic | 10μF | 25WV | |
| Ce33, 34 | CE04W1H100 | PC electrolytic | 10μF | 50WV | |
| Ce35, 36 | CC94SL1H101K | TC ceramic | 100pF | ±10% | |
| Ce37, 38 | CE04W0F470 | PC electrolytic | 47μF | 3.15WV | |
| Ce39, 40 | CE04W1H470 | PC electrolytic | 47μF | 50WV | |
| Ce41, 42 | CQ93M1H224M | Mylar | 0.22μF | ±20% | |
| Ce43 | CE04W2A470 | PC electrolytic | 47μF | 100WV | |
| Ce44 | CE04W0F101 | PC electrolytic | 100μF | 3.15WV | |
| Ce45 | CE04W1V101 | PC electrolytic | 100μF | 35WV | |
| Ce46 | CE04W1E101 | PC electrolytic | 100μF | 25WV | |
| Ce47 | CE04W1H100 | PC electrolytic | 10μF | 50WV | |
| Ce48 | CE04W1V221 | PC electrolytic | 220μF | 35WV | |
| **RESISTOR** | | | | | |
| Re1, 2 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Re3, 4 | PD14BY2E683J | Insulated carbon film | 68kΩ | ±5% | 1/4W |
| Re5, 6 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W |
| Re7, 8 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Re9, 10 | PD14BY2E334J | Insulated carbon film | 330kΩ | ±5% | 1/4W |
| Re11, 12 | PD14BY2E561J | Insulated carbon film | 560Ω | ±5% | 1/4W |
| Re13, 14 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W |
| Re15～20 | PD14BY2E563J | Insulated carbon film | 56kΩ | ±5% | 1/4W |
| Re21, 22 | PD14BY2E153J | Insulated carbon film | 15kΩ | ±5% | 1/4W |
| Re23, 24 | PD14BY2E394J | Insulated carbon film | 390kΩ | ±5% | 1/4W |
| Re25, 26 | PD14BY2E273J | Insulated carbon film | 27kΩ | ±5% | 1/4W |
| Re27, 28 | PD14BY2E561J | Insulated carbon film | 560Ω | ±5% | 1/4W |
| Re29, 30 | PD14BY2E224J | Insulated carbon film | 220kΩ | ±5% | 1/4W |
| Re31, 32 | PD14BY2E184J | Insulated carbon film | 180kΩ | ±5% | 1/4W |
| Re33, 34 | PD14BY2E564J | Insulated carbon film | 560kΩ | ±5% | 1/4W |
| Re35, 36 | PD14BY2E330J | Insulated carbon film | 33Ω | ±5% | 1/4W |
| Re37, 38 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W |
| Re39, 40 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W |
| Re41, 42 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Re43, 44 | PD14BY2E123J | Insulated carbon film | 12kΩ | ±5% | 1/4W |
| Re45, 46 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Re47, 48 | PD14BY2E823J | Insulated carbon film | 82kΩ | ±5% | 1/4W |
| Re49～52 | PD14BY2E101J | Insulated carbon film | 100Ω | ±5% | 1/4W |
| Re53, 54 | PD14BY2E682J | Insulated carbon film | 6.8kΩ | ±5% | 1/4W |
| Re55, 56 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W |
| Re57～60 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W |
| Re61, 62 | PD14BY2E330J | Insulated carbon film | 33Ω | ±5% | 1/4W |
| Re63～66 | RN14A83DR47K | Metal film | 0.47Ω | ±10% | 1W |
| Re67, 68 | RC05GF2H4R7K | Carbon composition | 4.7Ω | ±10% | 1/2W |
| Re69, 70 | PD14BY2E100J | Insulated carbon film | 10Ω | ±5% | 1/4W |
| Re71, 72 | RN14AB3D4R7K | Metal film | 4.7Ω | ±10% | 1W |
| Re73 | PD14BY2E563J | Insulated carbon film | 56kΩ | ±5% | 1/4W |
| Re74 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Re75 | PD14BY2E154J | Insulated carbon film | 150kΩ | ±5% | 1/4W |
| Re76～78 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Re79, 80 | PD14CY2E273J | Insulated carbon film | 27kΩ | ±5% | 1/4W |
| Re81 | PD14BY2E331J | Insulated carbon film | 330Ω | ±5% | 1/4W |
| Re82 | PD14BY2E271J | Insulated carbon film | 270Ω | ±5% | 1/4W |
| Re83 | PD14BY2E272J | Insulated carbon film | 2.7kΩ | ±5% | 1/4W |
| Re84 | RC05GF2H471K | Carbon composition | 470Ω | ±10% | 1/2W |
| Re85 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W |
| Re86 | RC05GF2H221K | Carbon composition | 220Ω | ±10% | 1/2W |
| Re87 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W |
| Re88 | PD14BY2E333J | Insulated carbon film | 33kΩ | ±5% | 1/4W |
| **TRANSISTOR/DIODES** | | | | | |
| Qe1, 2 | | 2SC458LG (C) | | | |
| Qe3, 4 | | 2SC871 (E) or (F) | | | |
| Qe5, 6 | | 2SC458LG (C) or (D) | | | |
| Qe7, 8 | | 2SC1212A (C) | | | |
| Qe9, 10 | | 2SC1212A (B) or (C) | | | |
| Qe11, 12 | | 2SA606 | | | |
| Qe13, 14 | | 2SC458 (B) or (C) | | | |
| Qe15 | | 2SC734 (O) or (Y) | | | |
| Qe16 | | 2SD234 (D) or (Y) | | | |
| Qe17 | | 2SC711A (E) | | | |
| De1, 2 | | MV-13 | | | |
| De3, 4 | | 1N60 | | | |
| De5～7 | | 1S1553V | | | |
| De8 | | 1S338T | | | |
| **POTENTIOMETER/PC BOARD** | | | | | |
| VRe1, 2 | R12-0039-05 | PC trimmer potentiometer 500Ω (B) | | | |
| VRe3 | R12-2015-05 | PC trimmer potentiometer 5kΩ (B) | | | |
| – | J25-0561-03 | PC board | | | |

## SCHEMATIC DIAGRAM




## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS



## PARTS DESCRIPTION LIST

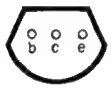
| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| | | **CAPACITOR** | | | | |
| Cy1, 2 | CQ93M1H103K | Mylar | 0.01μF | ±10% | | |
| Cy3, 4 | CQ93M1H104K | Mylar | 0.1μF | ±10% | | |
| Cy5, 6 | CQ93M1H222K | Mylar | 0.0022μF | ±10% | | |
| Cy7, 8 | CQ93M1H273K | Mylar | 0.027μF | ±10% | | |
| | | **RESISTOR** | | | | |
| Ry1, 2 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Ry3, 4 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W | |
| Ry5, 6 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Ry7, 8 | PD14BY2E681J | Insulated carbon film | 680Ω | ±5% | 1/4W | |
| | | **POTENTIOMETER/PC BOARD** | | | | |
| VRB | R06-4006-05 | BASS 50kΩ(A) dual | | | | |
| VRT | R06-4006-05 | TREBLE 50kΩ(A) dual | | | | |
| — | J25-0446-14 | PC board | | | | |

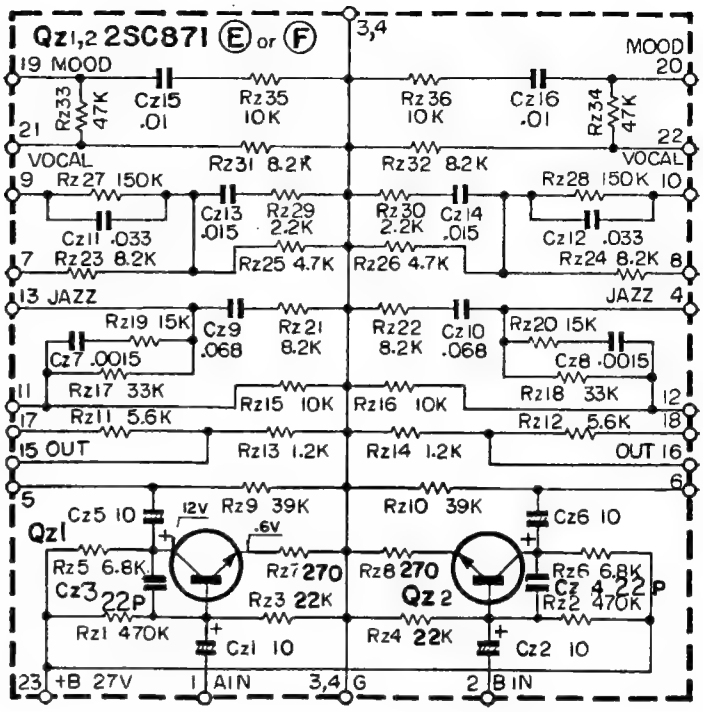
(KR-6170)

## SCHEMATIC DIAGRAM

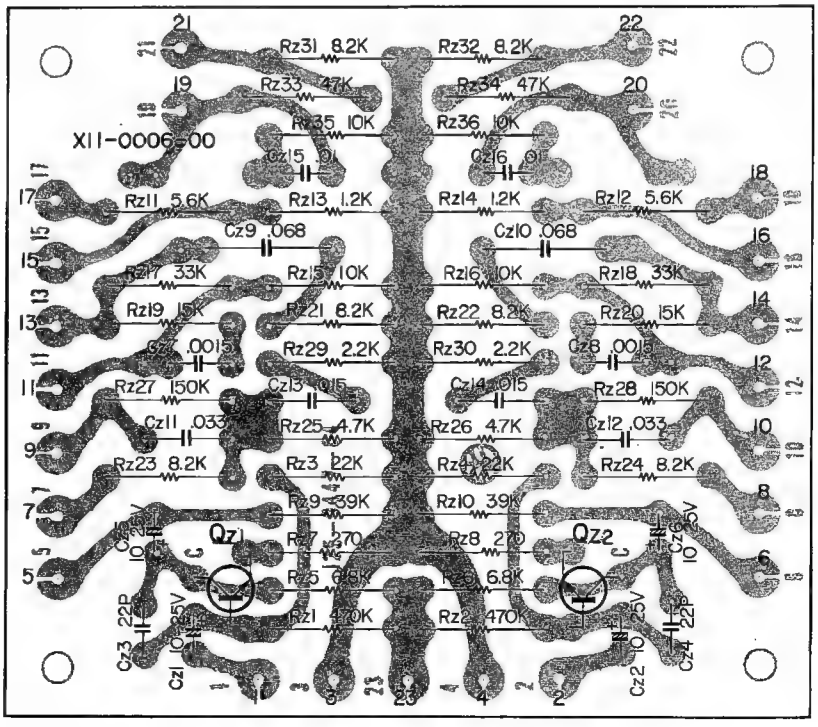
BOTTOM VIEW OF TRANSISTOR

2SC871




## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS




Qz1, 2 2SC871 (E) or (F)

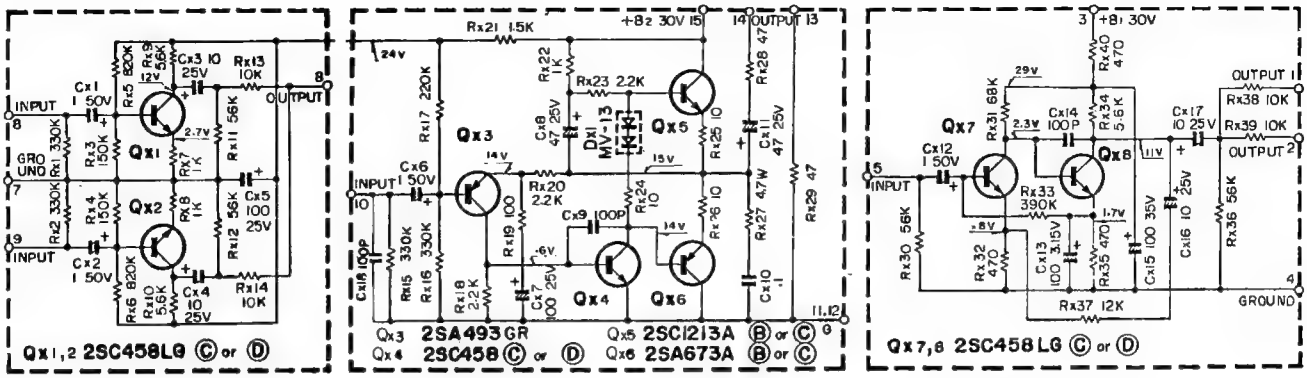
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| | | **CAPACITOR** | | | | |
| Cz1, 2 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Cz3, 4 | CC94SL1H220K | TC ceramic | 22pF | ±10% | | |
| Cz5, 6 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Cz7, 8 | CQ93M1H152K | Mylar | 0.0015μF | ±10% | | |
| Cz9, 10 | CQ93M1H683K | Mylar | 0.068μF | ±10% | | |
| Cz11, 12 | CQ93M1H333K | Mylar | 0.033μF | ±10% | | |
| Cz13, 14 | CQ93M1H153K | Mylar | 0.015μF | ±10% | | |
| Cz15, 16 | CQ93M1H103K | Mylar | 0.01μF | ±10% | | |
| | | **RESISTOR** | | | | |
| Rz1, 2 | PD14BY2E474J | Insulated carbon film | 470kΩ | ±5% | 1/4W | |
| Rz3, 4 | PD14BY2E223J | Insulated carbon film | 22kΩ | ±5% | 1/4W | |
| Rz5, 6 | PD14BY2E682J | Insulated carbon film | 6.8kΩ | ±5% | 1/4W | |
| Rz7, 8 | PD14BY2E271J | Insulated carbon film | 270Ω | ±5% | 1/4W | |
| Rz9, 10 | PD14BY2E393J | Insulated carbon film | 390kΩ | ±5% | 1/4W | |
| Rz11, 12 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Rz13, 14 | PD14BY2E122J | Insulated carbon film | 1.2kΩ | ±5% | 1/4W | |
| Rz15, 16 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Rz17, 18 | PD14BY2E333J | Insulated carbon film | 33kΩ | ±5% | 1/4W | |
| Rz19, 20 | PD14BY2E153J | Insulated carbon film | 15kΩ | ±5% | 1/4W | |
| Rz21～24 | PD14BY2E822J | Insulated carbon film | 8.2kΩ | ±5% | 1/4W | |
| Rz25, 26 | PD14BY2E472J | Insulated carbon film | 4.7kΩ | ±5% | 1/4W | |
| Rz27, 28 | PD14BY2E154J | Insulated carbon film | 150kΩ | ±5% | 1/4W | |
| Rz29, 30 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W | |
| Rz31, 32 | PD14BY2E822J | Insulated carbon film | 8.2kΩ | ±5% | 1/4W | |
| Rz33, 34 | PD14BY2E473J | Insulated carbon film | 47kΩ | ±5% | 1/4W | |
| Rz35, 36 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| | | **TRANSISTOR/PC BOARD** | | | | |
| Qz1, 2 | | 2SC871(E) or (F) | | | | |
| — | J25-0447-04 | PC board | | | | |

# KENWOOD® REVERB AMP (X13-1020-00) SECTION

(KR-6170)

## SCHEMATIC DIAGRAM

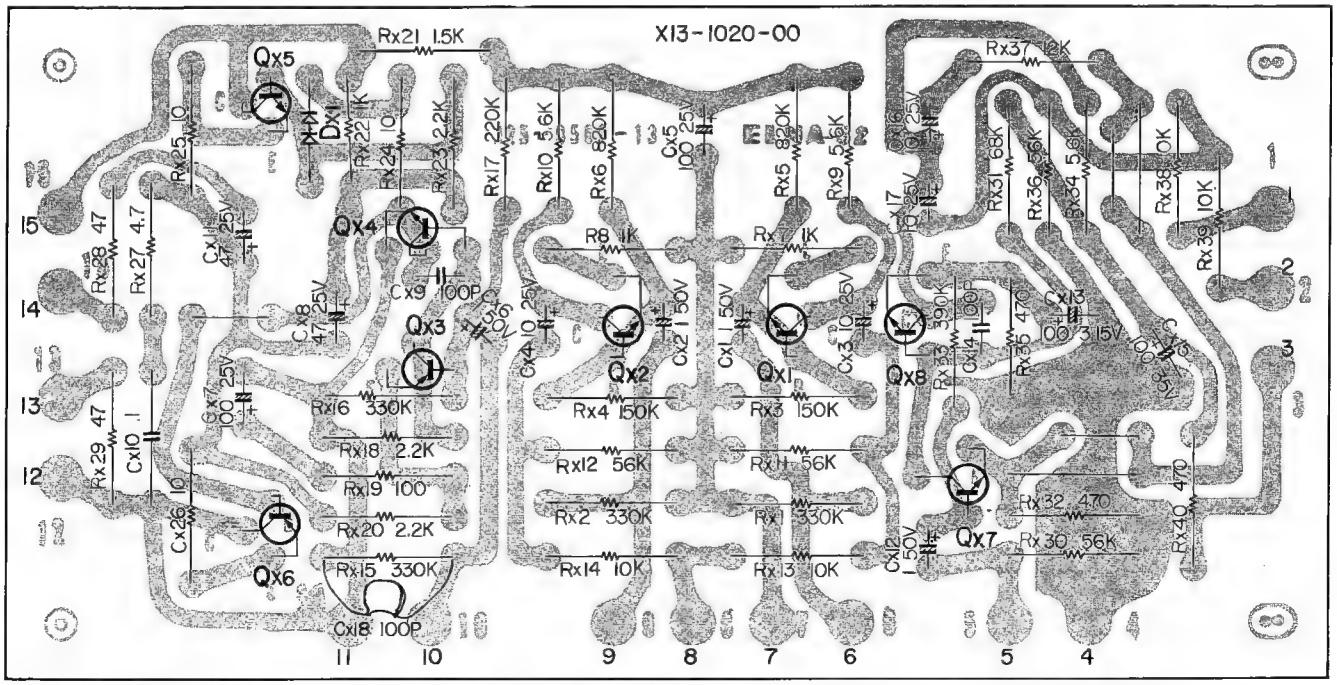



### BOTTOM VIEW OF TRANSISTOR

2SA673A
2SC458
2SC1213

2SA493

## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS




Qx1,2,7,8: 2SC458LG (C) or (D), Qx3: 2SA493GR, Qx4: 2SC458(C) or (D), Qx5: 2SC1213A(B) or (C), Qx6: 2SA673A(B) or (C)
Dx1: MV-13

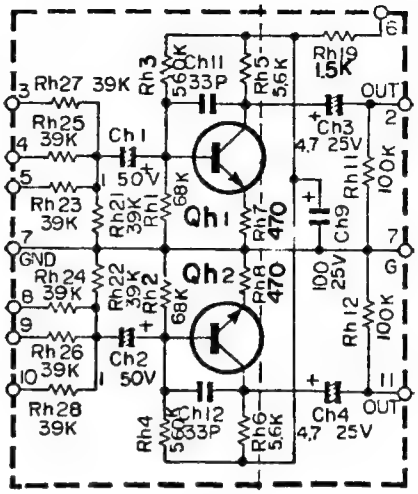
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | | Remarks |
|---|---|---|---|---|---|---|
| **CAPACITOR** | | | | | | |
| Cx1, 2 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Cx3, 4 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Cx5 | CE04W1E101 | PC electrolytic | 100μF | 25WV | | |
| Cx6 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Cx7 | CE04W1E101 | PC electrolytic | 100μF | 25WV | | |
| Cx8 | CE04W1E470 | PC electrolytic | 47μF | 25WV | | |
| Cx9 | CC94SL1H101K | TC ceramic | 100pF | ±10% | | |
| Cx10 | CQ93M1H104M | Mylar | 0.1μF | ±20% | | |
| Cx11 | CE04W1E470 | PC electrolytic | 47μF | 25WV | | |
| Cx12 | CE04W1H010 | PC electrolytic | 1μF | 50WV | | |
| Cx13 | CE04W0F101 | PC electrolytic | 100μF | 3.15WV | | |
| Cx14 | CC94SL1H101K | TC ceramic | 100pF | ±10% | | |
| Cx15 | CE04W1V101 | PC electrolytic | 100μF | 35WV | | |
| Cx16, 17 | CE04W1E100 | PC electrolytic | 10μF | 25WV | | |
| Cx18 | CC94SL1H101K | TC ceramic | 100μF | ±10% | | |
| **RESISTOR** | | | | | | |
| Rx1, 2 | PD14BY2E334J | Insulated carbon film | 330kΩ | ±5% | 1/4W | |
| Rx3, 4 | PD14BY2E154J | Insulated carbon film | 150kΩ | ±5% | 1/4W | |
| Rx5, 6 | PD14BY2E824J | Insulated carbon film | 820kΩ | ±5% | 1/4W | |
| Rx7, 8 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| Rx9, 10 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Rx11, 12 | PD14BY2E563J | Insulated carbon film | 56kΩ | ±5% | 1/4W | |
| Rx13, 14 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Rx15, 16 | PD14BY2E334J | Insulated carbon film | 330kΩ | ±5% | 1/4W | |
| Rx17 | PD14BY2E224J | Insulated carbon film | 220kΩ | ±5% | 1/4W | |
| Rx18 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W | |
| Rx19 | PD14BY2E101J | Insulated carbon film | 100Ω | ±5% | 1/4W | |
| Rx20 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W | |
| Rx21 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% | 1/4W | |
| Rx22 | PD14BY2E102J | Insulated carbon film | 1kΩ | ±5% | 1/4W | |
| Rx23 | PD14BY2E222J | Insulated carbon film | 2.2kΩ | ±5% | 1/4W | |
| Rx24 | PD14BY2E100J | Insulated carbon film | 10Ω | ±5% | 1/4W | |
| Rx25, 26 | RC05GF2H100K | Carbon composition | 10Ω | ±10% | 1/2W | |
| Rx27 | RC05GF2H4R7K | Carbon composition | 4.7Ω | ±10% | 1/2W | |
| Rx28, 29 | RC05GF2H470K | Carbon composition | 47Ω | ±10% | 1/2W | |
| Rx30 | PD14BY2E563J | Insulated carbon film | 56kΩ | ±5% | 1/4W | |
| Rx31 | PD14BY2E683J | Insulated carbon film | 68kΩ | ±5% | 1/4W | |
| Rx32 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| Rx33 | PD14BY2E394J | Insulated carbon film | 390kΩ | ±5% | 1/4W | |
| Rx34 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% | 1/4W | |
| Rx35 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| Rx36 | PD14BY2E563J | Insulated carbon film | 56kΩ | ±5% | 1/4W | |
| Rx37 | PD14BY2E123J | Insulated carbon film | 12kΩ | ±5% | 1/4W | |
| Rx38, 39 | PD14BY2E103J | Insulated carbon film | 10kΩ | ±5% | 1/4W | |
| Rx40 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% | 1/4W | |
| **TRANSISTOR/DIODE/PC BOARD** | | | | | | |
| Qx1, 2 | | 2SC458LG(C) or (D) | | | | |
| Qx3 | | 2SA493(GR) | | | | |
| Qx4 | | 2SC458(C) or (D) | | | | |
| Qx5 | | 2SC1213A(B) or (C) | | | | |
| Qx6 | | 2SA673A(B) or (C) | | | | |
| Qx7, 8 | | 2SC458LG(C) or (D) | | | | |
| Dx1 | | MV-13 | | | | |
| – | J25-0562-13 | PC board | | | | |

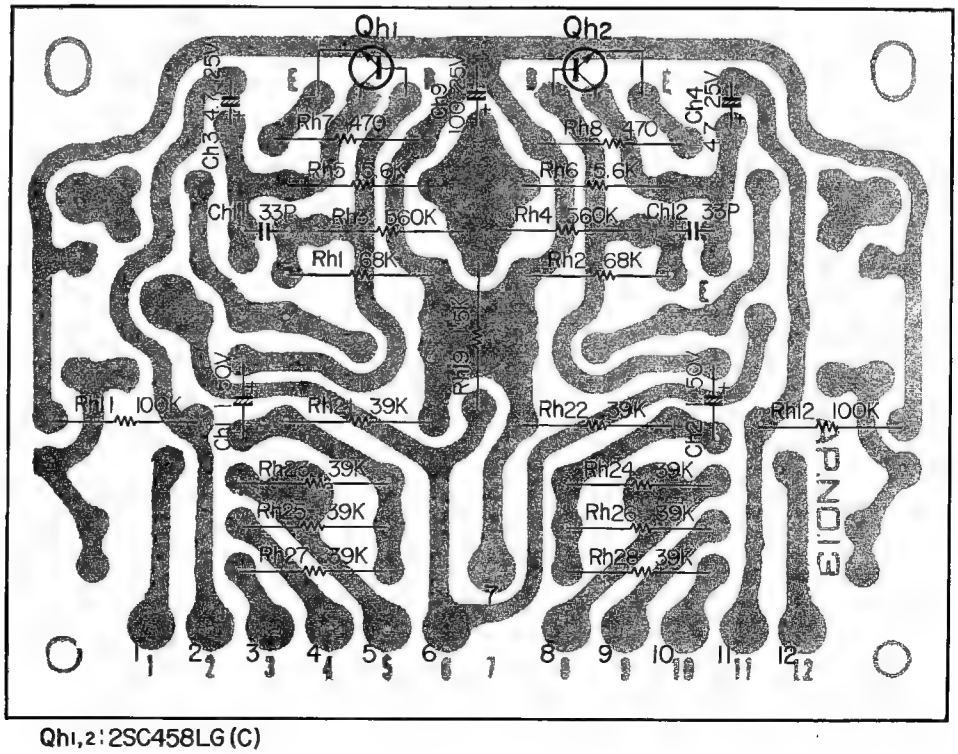
## SCHEMATIC DIAGRAM

BOTTOM VIEW OF TRANSISTOR

2SC458


## SEALED CIRCUIT ASSEMBLIES PHANTOM VIEWS



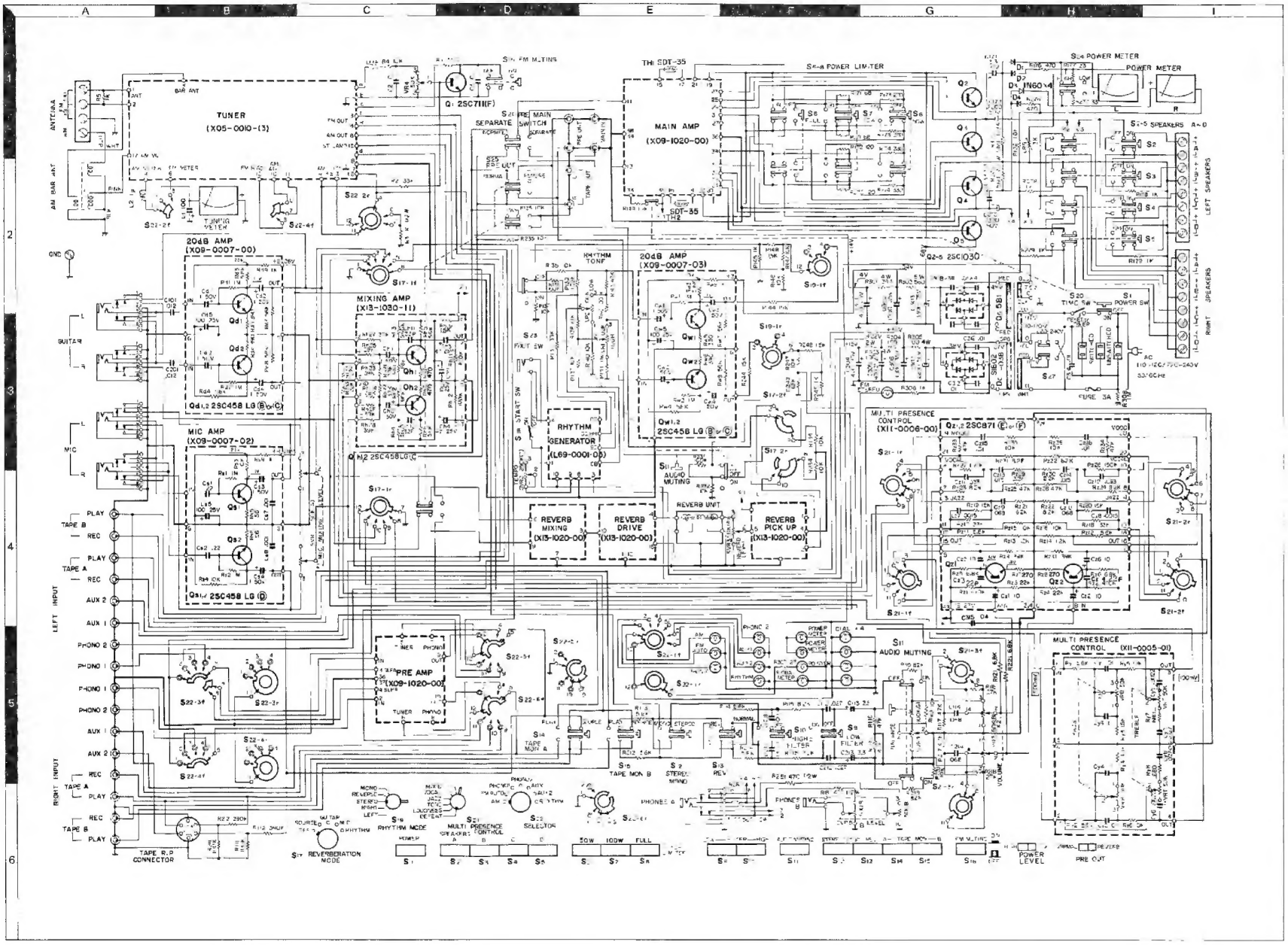

Qh1,2: 2SC458LG (C)

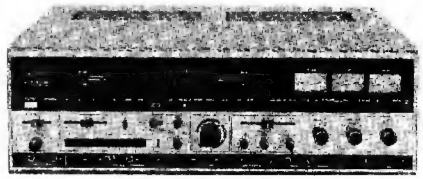
## PARTS DESCRIPTION LIST

| Circuit No. | Parts No. | Description | | | Remarks |
|---|---|---|---|---|---|
| | | **CAPACITOR** | | | |
| Ch1, 2 | CE04W1H010 | PC electrolytic | 1μF | 50WV | |
| Ch3, 4 | CE04W1E4R7 | PC electrolytic | 4.7μF | 25WV | |
| Ch9 | CE04W1E101 | PC electrolytic | 100μF | 25WV | |
| Ch11, 12 | CC94SL1H330K | TC ceramic | 33pF | ±10% | |
| | | **RESISTOR** | | | |
| Rh1, 2 | PD14BY2E683J | Insulated carbon film | 68kΩ | ±5% 1/4W | |
| Rh3, 4 | PD14BY2E564J | Insulated carbon film | 560kΩ | ±5% 1/4W | |
| Rh5, 6 | PD14BY2E562J | Insulated carbon film | 5.6kΩ | ±5% 1/4W | |
| Rh7, 8 | PD14BY2E471J | Insulated carbon film | 470Ω | ±5% 1/4W | |
| Rh11, 12 | PD14BY2E104J | Insulated carbon film | 100kΩ | ±5% 1/4W | |
| Rh19 | PD14BY2E152J | Insulated carbon film | 1.5kΩ | ±5% 1/4W | |
| Rh21～28 | PD14BY2E393J | Insulated carbon film | 39kΩ | ±5% 1/4W | |
| | | **TRANSISTOR/PC BOARD** | | | |
| Qh1, 2 | | 2SC458LG(C) | | | |
| — | J25-0077-04 | PC board | | | |

TRIO

Manufactured by TRIO ELECTRONICS INC., TOKYO, JAPAN.



## SPECIFICATIONS

### FM TUNER SECTION

| | |
|---|---|
| Antenna Impedance | 300 ohms balanced and 75 ohms unbalanced |
| Usable Sensitivity (IHF) | 1 µV |
| Harmonic Distortion (at 400 Hz 100% Mod.) | |
| Mono | 0.8% |
| Stereo | 0.8% |
| Signal to Noise Ratio | 80 dB |
| Capture Ratio (IHF) | 1.0 dB |
| Selectivity (±400 kHz) (IHF) | 45 dB |
| Image Rejection | 80 dB |
| IF Rejection | 100 dB |
| AM Suppression | 55 dB |
| Stereo Separation | |
| At 1 kHz | 30 dB |
| At 10 kHz | 25 dB |
| 38k Carrier Suppression | 40 dB |
| Stereo Auto-Switching Level | 10 µV |
| Front End | 1 dual-gate MOSFET |
| IF Stage | 7 IC |

### AM TUNER SECTION

| | |
|---|---|
| Antenna | Built-in ferrite bar antenna and External antenna terminals |
| Usable Sensitivity (IHF) | 20 µV |
| Selectivity (IHF) | 25 dB |
| Image Rejection | 45 dB |
| IF Rejection | 35 dB |
| Front End | 1 dual-gate MOSFET |

### AMPLIFIER SECTION

| | |
|---|---|
| Power Output | |
| Both ch. at 4 ohms | 150 watts |
| Both ch. at 8 ohms | 130 watts |
| Dynamic Power Output | |
| Both ch. at 4 ohms | 180 watts |
| Both ch. at 8 ohms | 110 watts |
| Continuous Power Output | |
| Each ch. at 4 ohms | 80+80 watts |
| Each ch. at 8 ohms | 40+40 watts |
| Both ch. at 4 ohms | 39+39 watts |
| Both ch. at 8 ohms | 33+33 watts |
| Harmonic Distortion | |
| At rated | 0.1% |
| At –3 dB rated | 0.1% |
| Intermodulation Distortion | |
| At rated | 0.1% |
| At –3 dB rated | 0.2% |
| Frequency Response | |
| High Level (AUX) Input | 20 – 40,000 Hz ±1 dB |
| Power Bandwidth (IHF) | 11 – 50,000 Hz |
| Hum and Noise | |
| Phono 1, 2 | 65 dB |
| MIC | 58 dB |
| AUX/Tape play | 75 dB |
| Input Sensitivity (for rated output) | |
| Phono 1 | 2.5 mV 40k ohms |
| Phono 2 | 2.5 mV 50k ohms |
| MIC | 2.0 mV 10k ohms |
| Output | 775 mV 50K ohms |
| AUX 1 | 150 mV 60K ohms |
| AUX 2 | 150 mV 60K ohms |
| Tape play A | 150 mV 60k ohms |
| Tape play B | 150 mV 60k ohms |
| Rec input | 150 mV |
| Damping Factor (at 8 ohms) | 60 |
| Speaker Impedance | Accept 4 to 16 ohms |
| Multi Presence Control | |
| Selector | Defeat |
| | Loudness at 100 Hz +10 dB |
| | Piano |
| | Jazz |
| | Vocal |
| | Rock |
| Bass Control (at 100 Hz) | ±10 dB |
| Treble Control (at 10,000 Hz) | ±10 dB |

### ELECTRONIC RHYTHM COMPOSER SECTION

| | |
|---|---|
| Rhythm Selector | |
| | (1) March (2) Rock'n'Roll (3) Rock (4) R and B (5) Ballad (6) Shuffle (7) Espanola 1 |
| | (8) Bossanova 2, (9) Slow Beat, (10) Mambo, (11) Waltz, (12) Jazz Waltz |
| Electronic Percussions | 5 (filtered sounds) |
| Rhythm Mode Switch | Left, Right, Stereo, Reverse, Mono |
| Foot Switch Jack | Yes |
| Accessory Parts | Foot Switch (Remote Control Switch of START and BREAK) (E, F, C) |

### REVERBERATION SECTION

| | |
|---|---|
| Level Control | 0 to 3 seconds |
| Mode | Off – Source – Sum – MIC – Rhythm |

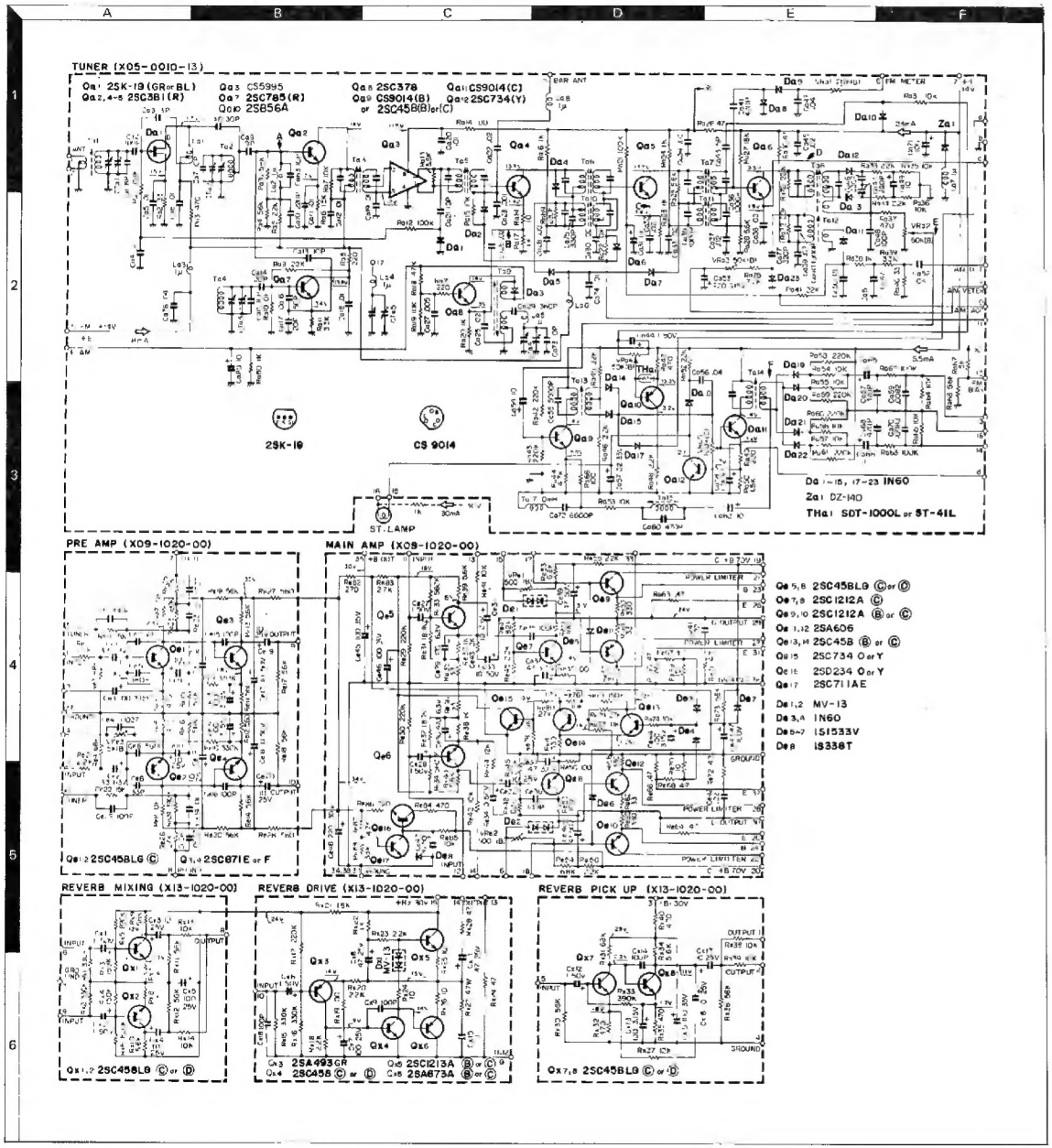
### TIMER SECTION

| | |
|---|---|
| | 2 hours |

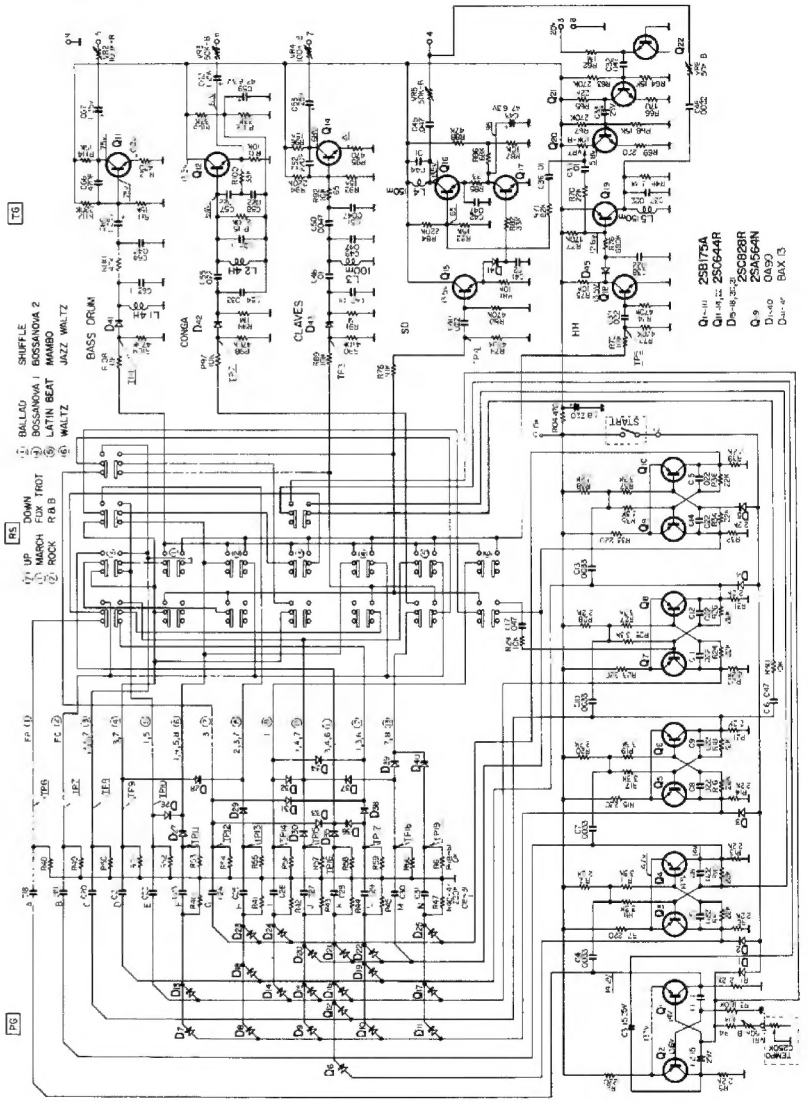
### GENERAL

| | |
|---|---|
| Switches | |
| Speakers | A, B, C, D |
| Selector | AM, FM Auto, Phono 1, Phono 2, AUX 1, AUX 2, Tape/rp |
| Power Limiter | 90 watts, 150 watts, Full Power |
| Mode Switches | Stereo, Mono, Normal, Reverse |
| Tape Monitor A | Source, Play |
| Tape Monitor B | Source, Play |
| Audio muting | ON, –20 dB, OFF |
| FM Muting | ON, OFF |
| Low Filter | ON, OFF |
| High Filter | ON, OFF |
| Power meter | Low, High |
| Pre out | Normal, Reverse, Right, Left |
| Pre out-mem to | Normal, Reverse, Right, Left |
| For Separate Use of Pre and Main Amplifier | |
| Others | S. Phones Level |
| | Mic Level |
| | Stereo Jack (L, R) |
| | Mic Jack (L, R) |
| | Phones Jack (A, B) |
| | Binding Terminals (Front) |
| | Pre Out, Main In Terminals (Rear) |
| AC Outlets | Switched 1 |
| | Unswitched 2 |
| Power Consumption | |
| At full power | 240 watts |
| At no signal | 45 Watts |
| Dimensions | W 21-3/4" – H 6-3/4" – D 16-1/4" |
| Weight | 29 Lbs./13 kg |
| Accessory Parts | Dynamic MIC |
| Walnut Cabinet | one |

KR-6170 KR-6170




## RHYTHM GENERATOR



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